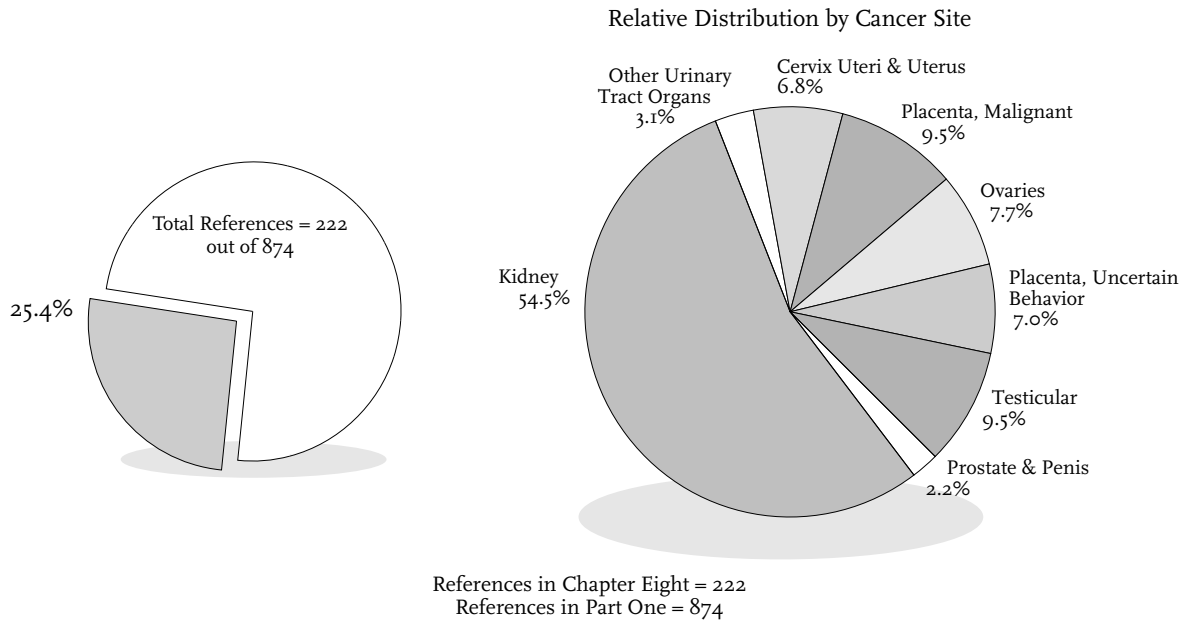


8. Remission of Neoplasms of Genitourinary Organs



Remission of Neoplasms of Genitourinary Organs



Genitourinary cancers account for 24.1% of the cases reported by participating tumor registries to the SEER (Surveillance, Epidemiology, and End Results) Program between 1983 and 1987. Incidence statistics show that kidney cancer accounts for 2.1% of the total reported cases; bladder for 4.6%; testicular for 0.6% of all reported cases and 1.3% of the cases reported in males; prostate for 10.2% (20.4% of males); ovarian for 2.0% of the total reported cases and 4.0% of the cases reported in females; cervical for 1.3% (2.6% of females); and cancers of the corpus uteri and uterus, 3.2% (6.5% of females). The relative five-year survival rates (1974-1986) are 52% for kidney; 76% for bladder; 88% for testicular; 71% for prostate; 38% for ovarian; 65.8% for cervical; 85% for corpus uteri and uterus, 3.2% (6.5% of females). The relative five-year survival rates (1974-1986) are 52% for kidney; 76% for bladder; 88% for testicular; 71% for prostate; 38% for ovarian; 65.8% for cervical; 85% for corpus uteri and uterus, 3.2% (6.5% of females). The relative five-year survival rates (1974-1986) are 52% for kidney; 76% for bladder; 88% for testicular; 71% for prostate; 38% for ovarian; 65.8% for cervical; 85% for corpus uteri and uterus, 3.2% (6.5% of females). Mortality data show that genitourinary cancers account for 14.8% of the mortality cases reported to the SEER program between 1983 and 1987 for males and females combined. Cancer of the kidney accounts for 1.8%; bladder for 2.3%; testicular for 0.1% (0.2% for males); prostate cancer, 5.5% (10.2% for males); ovarian cancer, 2.6% (5.6% for females); uterine cancers, 1.4% (3.1% for females); and cervical cancer, 1.1% (2.5% for females) (Cancer Statistics Review 1973-1987).

Of the 222 references in Chapter 8, 70 references are annotated with summaries. Some annotated references contain 1 or more case reports. There are 152 supplemental references provided as additional research materials. Full text of 61 case reports is included.

The chapter contents are summarized in Table One. A comparative analysis of cases reported in previous reviews of the literature is presented in Table Two.

Table One: References and Case Reports in Chapter Eight †

Tumor Site	References (number)	Cases (number)	Cases (%)
Kidney	121	42	16.3%
Bladder	7	2	0.8%
Uterus	8	2	0.8%
Cervix	7	3	1.1%
Placenta (malignant)	21	3	1.1%
Placenta (uncertain)	15	3	1.1%
Ovaries	17	3	1.1%
Testis	21	2	0.8%
Penis	1	1	0.4%
Prostate	4	0	0.0%
Totals	222	61	23.5%

† Total number of case reports in Part One is 258.

Table Two: Comparison Between Other Major Literature Reviews of Cases of Spontaneous Regression of Neoplasms of Genitourinary Organs

Tumor Site	Rohdenburg (1918) (N=185)	Fauvet (1960) (N=192)	Boyd (1966) (N=97)	Everson (1966) (N=182)	Challis (1990) (N=505)
Kidney	1	16	3	33	68
Bladder	1	19	1	13	6
Uterus	42	6	0	4	2
Cervix	10	10	2	0	0
Chorioepithelioma	10	13	3	19	1
Ovaries	3	9	0	7	1
Testis	1	5	2	8	16
Penis	0	3	0	0	0
Prostate	0	1	0	0	0
Vagina	1	1	0	0	0
Totals	69	69	13	84	94

Malignant Neoplasms of the Kidneys and Other Urinary Tract Organs

RENAL CARCINOMA

Spontaneous Regression of a Hypernephroma

RAE MV

American Journal of Cancer 24: 1935; 839-841

Extracted Summary

Spontaneous regression of malignant tumours, wherein healing is complete or includes the larger part of a tumour, is very rare. Bashford estimated that it occurs but once in one hundred thousand cases. The case which came to our attention was a large tumour of the kidney which had undergone necrosis and calcification.

SELECTED CASE REPORT

The patient was a woman of sixty-one years, whose symptoms were related to the gastrointestinal tract. A large, fixed mass was palpable in the left upper abdomen; no pain nor tenderness was elicited. X-ray examination disclosed a retroperitoneal, calcareous, cystic mass in the left upper abdominal quadrant, displacing the spleen upward, forward, and laterally, with the stomach overlying it anteriorly. In the stomach, a large indentation was seen on the greater curvature, apparently resulting from the pressure of the mass. Pyelography showed the left kidney displaced downward, and it was thought that the mass could be visualized as lying above and behind the displaced kidney. The upper calices were dilated, and distorted, apparently by the pressure of this mass. The right kidney pelvis and calices were normal. Both kidneys were functioning normally and the urine contained no cells. The greater part of the mass, as seen by x-ray, was spherical in shape, with, however, a knob-like process the size of a small orange projecting from its lower extremity. The dimensions of the shadow were 8 1/2 x 5 1/2 inches. The origin of the tumour was not definitely determined, although it was thought not to be a primary tumour of the kidney.

An exploratory operation was done by Dr. Roscoe R. Graham, and a large retroperitoneal tumour was found, arising in the upper pole of the left kidney. It was readily removed en masse with the kidney. The patient made an uneventful postoperative recovery. No metastatic growths were discovered at operation nor on x-ray examination.

The gross specimen was a large, globular tumour growth measuring 13 centimeters in diameter, involving the upper half of the kidney. It was enclosed within a smooth capsule which was continuous with that of the kidney, and was stony hard in consistency, requiring a saw

to cut it. The entire mass was calcified, except for one small piece of soft tissue about the size of a marble found after careful search for material suitable for section. The cut surface presented a picture resembling a hypernephroma. The color was yellowish and greyish-white, mottled with patches and streaks of golden brown pigment. Many large and small cystic spaces were present, and the center of the mass was occupied by a large, smooth-walled cavity 7 centimeters in diameter. These cysts contained soft greyish-yellow, jelly-like material. There were, however, none of the hemorrhagic areas commonly seen in hypernephroma. The growth was sharply demarcated from the kidney by a continuation of its capsule, and there was no invasion of the remaining portion of the kidney. Distortion of the upper calices and pelvis was quite marked, and the wall of one of the calices was partly formed by the capsule of the tumour, but was not eroded.

Decalcified blocks of the tumour were entirely devoid of cellular structure. The material was of a dense homogeneous hyaline nature which took a light eosin stain. In this were deposited large, irregular sheets of calcium. The arrangement of these structures did not suggest any pre-existing cellular architecture. Bone formation was not evident. Sections of the soft tissue, however, showed small nests of cells lying singly or in groups, with much necrotic tissue intervening. The groups of tumour cells were arranged about small, thin-walled blood vessels. Individual cells were very large, irregular in outline, and pale staining. The nuclei were small, round, deeply stained, and eccentrically placed, and in the cytoplasm were many large and small vacuoles. No tumour cells could be found lying within blood vessels. The cells which had survived to this stage were now showing definite degenerative changes.

From the gross appearance of the tumour and its location in the kidney we considered it to be a calcified hypernephroma. The discovery of the small groups of typical nephroma cells definitely decided the diagnosis.

Sections from the remaining portion of the kidney showed no evidence of tumour invasion. A small atrophic left adrenal gland was removed at operation, which was not involved in the tumour.

Spontaneous Regression of a Kidney Tumor

DAVIDSON B

Urologic and Cutaneous Review 45: 1941; 13-15

Extracted Summary

A case of painless hematuria is reported in a 72-year-old male who had a mass in the left flank. Cystoscopic and radiographic study led to a diagnosis of cortical tumor of the left kidney. An exploratory operation was done, and an inoperable tumor was found. The patient survived for more than four years, the tumor having apparently regressed spontaneously.

SELECTED CASE REPORT

Mr. M. S., 72 years of age, was admitted to Beth Moses Hospital on August 1, 1933, because of hematuria and passage of clots for the past three weeks. In his previous history it was noted that he developed retention of urine two years previously and was cystoscoped. The findings are not known. Following the instrumentation he developed a hematuria lasting a day or two. Then he began to void freely and was well till three weeks ago when he began to pass blood in his urine with clots. This would last two or three days and then the urine would clear for a day. He voids now every two or three hours and has to get up at night two or three times. His bowels move but occasionally he has to take an enema or a laxative.

Physical examination revealed an aged, white male who appeared to be very pale and somewhat thin. Pupils were equal, reacted to light and accommodation; arcus senilis present. The chest was emphysematous. Pulse was regular and of fair quality. A systolic murmur was heard at the apex. The abdomen was soft. A mass could be palpated in the left side of the abdomen. The mass was firm, only slightly tender, extending from the left costal margin to the iliac crest and from the left flank to the mid-line; it seemed to move with respiration and was ballotable. It was thought to be an enlarged left kidney. A large varicocele was noted in the left scrotum.

The prostate was enlarged, firm and even in consistency. The voided specimen of urine was bloody and contained clots. Patient was catheterized and two ounces of residual urine were found. Blood pressure 140/80. Examination of the blood revealed a hemoglobin of 45% (Sahli); erythrocytes 2,230,000, and leukocytes 8,800/mm³ with a differential count of 75% polymorphonuclears. Chemical tests revealed a blood sugar of 95 milligrams, urea nitrogen 35 milligrams, and creatinine 2.7 mg/100 cc of blood. The Wassermann reaction was negative.

Radiographic study of the genitourinary tract revealed the left kidney enlarged to about twice its normal size with

the lower pole nearly reaching the crest of the ilium. The right kidney while not well defined appeared normal in size. The bony pelvis had a peculiar mottled appearance. The impression gained from this plain film was that the left kidney was tumefied.

On the third day he was cystoscoped. The cystoscope was introduced easily. The urine was hemorrhagic. There was moderate intrusion of the middle lobe and right and left lateral lobes. The bladder was filled with organized clots which could not be washed out. It was not possible to visualize the ureteral orifices and their catheterization had to be deferred.

On August 7th an intravenous excretory urography was done. The radiographic report was that the right kidney functioned within normal limits. The left kidney pelvis was visualized only faintly after 30 minutes; the calyces were not outlined. The left kidney was enlarged and suggested a pathological change of marked degree. Cystogram obtained showed a smooth outline and no defects.

The hematuria became less marked and the patient was cystoscoped again on August 10th. The bladder urine was "smoky" and the mucosa could now be visualized after irrigation. No clots were present. The mucosa appeared congested but there were no foreign bodies or new growths in the bladder. Both ureteral orifices were visualized and appeared injected. The right ureter was catheterized to pelvis of kidney without meeting any obstruction and clear urine obtained. The left ureter was catheterized to pelvis of kidney without meeting any obstruction and there was a flow of hemorrhagic urine. Functional test: Five cc indigo-carmin injected intravenously. Good reaction on right side after five minutes. No return of the dye from the left side after 12 minutes.

Radiographic study with the catheters in situ and left retrograde pyelography showed the left pelvis dilated, the upper calyces bulbous and a defect in the lower calyces. The left kidney was markedly enlarged. The radiographic opinion was tumor of the left kidney. X-ray of chest did

not show any evidence of metastasis in the lungs but did show an aortitis and aortic type heart.

Patient continued to have hematuria on and off. The temperature varied from 98.6° to 101°F daily. He was given a direct transfusion of 350 cc of whole blood on August 15, 1933. A pre-operative diagnosis of a cortical tumor of the left kidney was made and operation undertaken on August 16, 1933. Under gas, oxygen, ether anesthesia the usual postero-lumbar incision was made and the tumor approached retroperitoneally. A large, firm, somewhat irregular mass was felt. It was firmly adherent to the surrounding structures; the surface was covered with large, tortuous veins. Attempts to mobilize it into the wound resulted in profuse hemorrhage. Continuation of the dissection and separation of its connections would have resulted in injury to the surrounding structures. The lesion was considered inoperable; the hemorrhage was controlled by packing with gauze and the wound closed.

The patient was given another direct transfusion of whole blood. He rallied well from the exploratory operation. The wound healed well; he was allowed to sit out of bed on the thirteenth day postoperative. The hematuria was less marked although his hemoglobin was down to 42% (Sahli) and erythrocytes to 2,200,000.

He was discharged with a diagnosis of an inoperable cortical tumor of the left kidney, probably hypernephroid in type, and was transferred to The Sanitarium and Hospital for Chronic Diseases on September 13, 1933, and was lost sight of.

Three years later in a follow-up study, a card was written to the Sanitarium and to the patient's last known address. Much to our surprise the patient presented himself at the Hospital on August 27, 1936, in a very happy state of mind. To reach the Hospital he had travelled for about one hour by trolley car. He was now over 75 years of age; he appeared pale and thin but otherwise vigorous for his age. He stated that he remained at the Sanitarium for about two months, leaving voluntarily on November 12, 1933. During his stay there, subsequent study of the

records show, he received only nursing care. He did not receive any x-ray or radium therapy. He further stated that he remained thereafter at home and gradually began to gain in strength.

He was examined now and strange to relate the large mass in the left abdomen could not be palpated. The scar in the left lumbar region was firm and linear and did not show any evidence of infiltration or previous suppuration. The voided specimen of urine was hazy; it showed a faint trace of albumin and a few white blood cells.

An x-ray of the genitourinary tract was taken on August 27, 1936. This showed that the left kidney was decidedly smaller (about a third in size) than noted on the last examination made three years previously and was about the same size as the right kidney. The irregular bony changes of the pelvis noted previously remained characteristically the same. An x-ray of the chest showed no evidence of any neoplastic formations.

He would permit no further examination in spite of much persuasion. Cystoscopy was suggested and then an intravenous urography but he remained obdurate. He would not even permit pricking of his finger for a blood count. He was more than satisfied with his condition and would not permit any instrumental examination and disappeared from sight again.

Recently making inquiry among his neighbors I learned that he died at a city hospital. Correspondence with this institution showed that the patient had been admitted there on September 27, 1937. This was 13 months after my last examination and more than four years after the exploratory operation. He was more than 76 years of age now. He was irrational when admitted and in a precarious condition. No coherent history could be obtained except that he had urinary retention. When he was catheterized, foul, fecal urine was obtained. Cystoscopy could not be done. He died there one week later on October 5, 1937. No autopsy was performed. The diagnosis was prostatic hypertrophy; uremia; functionless left kidney; carcinoma of the bladder; vesicocolic fistula.

Spontaneous Regression of Hypernephromas

BARTLEY O; HULTQUIST GT

Acta Pathologica et Microbiologica Scandinavica 27: 1950; 448

Extracted Summary

A lesion with a papillomatous surface and composed of a center area of loose connective tissue surrounded by a capsular zone of denser connective tissue has been observed in the surface of the kidney in 26 cases. In 10 of the cases there were plainly evident remains of hypernephroma in the center area and in 7 cases there were groups of cells that resembled hypernephroma cells but could not be diagnosed as such with perfect certainty. In 9 cases displaying the same morphologic appearances no tumorous tissue was demonstrated.

The material hitherto studied is too small to permit correct judgment as to the causal genesis. A slight tendency towards a higher incidence of these regressive hypernephromas among patients with tuberculosis was distinguishable. Attention is drawn to a few cases where a connection with endocrine disturbances was thought possible.

Self-Healing Hypernephromas

ZAK FG

Mount Sinai Journal of Medicine 24: 1957; 1352-1356

Extracted Summary

While studying the phenomenon of spontaneous regression in epidermal cancer, our attention was drawn to Hultquist's findings on self-healing hypernephromas. The present report is based on autopsy material collected from a small hospital over a two-year period and emphasizes the common occurrence of spontaneous regression of cortical renal cancers, particularly of the clear-cell variety. These lesions may impress as banal scars. Five tumors, some of which were multiple, are reported.

SELECTED CASE REPORTS

A woman of 86 (T. A., Adm. No. 20) with a history of hypertension, was admitted with right hemiparesis, and sensory aphasia. She died six weeks later. Autopsy (A4-54) disclosed a great variety of findings, notable among which were healed, rheumatic carditis, obsolete, pulmonary Ghon tubercles and calcified, intramuscular trichinella larvae. She had a right radical mastectomy fifteen years before which, seemingly, was curative.

(We were not able to get more detailed information on that point.)

A woman 71 years old (R. B., Adm. No. 12694), was admitted for cardiac failure and coma accompanied by uremia to which she succumbed in a few days. Post-mortem studies (A 55-55) disclosed among other findings severe calcific mitral stenosis and renal lesions.

Angiography in Spontaneously Healed Hypernephromas

BARTLEY O; HELANDER CG

Acta Radiologica 57: 1962; 417-426

Extracted Summary

Three cases of spontaneously healed hypernephroma that were examined by angiography are reported. The regressive changes are described and the differential diagnosis between such changes and those due to a renal cyst are discussed. The question of the possibility of a definite roentgenologic diagnosis of spontaneous healing in hypernephroma is considered.

SELECTED CASE REPORTS

Case 2: Male, aged 73, admitted for prostatic symptoms. Urography disclosed an expansive process, about 5 centimeters in diameter, in the lateral part of the middle of the right kidney. Aortography was carried out in order, if possible, to determine the nature of the lesion. The arterial branches appeared to be stretched in an arc around the expansive process, just lateral to which was a structure about 1 centimeter in diameter supplied by a few small regular arterial branches. No pathologic vessels were discernible.

In the nephrographic phase there was less accumulation of contrast medium in the expanding process than in the surrounding renal parenchyma, while in the smaller structure a certain accumulation of medium was detectable. The larger tumor was sharply delineated against the renal parenchyma.

Nephrectomy was performed and the large expansive process, which proved to be cystic, was punctured.

Contrast medium was injected into the cystic formation which at subsequent roentgen examination presented appearances typical of a renal cyst. It was about 5 centimeters in size and was enclosed by a capsule, the thickness of which varied from 2 to 5 millimeters. Signs of trabeculae were observed in the cyst, but otherwise the wall was smooth; parts of the surface were covered with a film of coagulum. Three small, mostly solid neoplasms were present on the lateral aspect of the cystic formation. The largest of these, about 1 centimeter in size, had been disclosed at aortography.

Histologic examination revealed that the capsule of the large cyst consisted of cell-deficient collagenous connective tissue in which elastic fibrils were irregularly interspersed and that remnants of hypernephroma cells with marked regressive changes were present in a circumscribed area in that part of the cyst directed towards the kidney surface. The small neoplastic formations were

composed of highly differentiated hypernephroma cells with varying degrees of regressive changes and were separated from the adjacent renal parenchyma by a thin, capsule-like layer of connective tissue.

Case 3: Female, aged 58, complaining of bladder symptoms. At urography an indentation was observed in the mid-portion of the right kidney. No expansive process was demonstrable and the renal pelvis appeared normal.

Since the cause of the kidney deformity was obscure, aortography was performed. The indentation was found to be a small depression in the cortex, containing a superficial neoplastic formation, about 15 millimeters in size.

No pathologic vessels were observed but a slight accumulation of contrast medium was evident.

In the absence of a definite diagnosis operation was performed. Only a cyst filled with clear yellow fluid was found and its wall was excised. Histologic examination revealed that the capsule consisted of collagenous connective tissue, rather poor in cells but with numerous, somewhat dilated capillaries. In one or two areas sparse formations of highly differentiated hypernephroma cells, generally exhibiting regressive changes, were evident. This finding, which was unexpected, led to nephrectomy at a second operation. On histologic examination of the excised kidney, a small remnant of cyst wall was observed to contain a few highly differentiated hypernephroma cells with advanced regressive changes.

Regression of Hypernephromas

GOODWIN WE

Journal of the American Medical Association 204(7): May 13 1968; 147

Extracted Summary

It is well documented that clear-cell carcinomas of the kidney (hypernephromas) regress under certain circumstances. Bartley and Hultquist clearly illustrated this when they reviewed the literature and reported 26 of their own cases in 1950. It is also known that, in some instances, distant metastases of clear-cell carcinomas of the kidney have been known to regress or disappear.

Most reported regressions have been pulmonary metastases where the diagnosis was presumptive and where microscopic study of the pulmonary lesion was not available. In most cases, the regression occurred after removal of the primary lesion.

What factors govern this type of response? No one knows for sure, but since many of the regressions have followed removal of the primary tumor, there is some suggestion that it may represent a response on the part of the body after removal of the primary mass. This could be on an immunologic basis or could represent hormonal control. The true incidence of regression of hypernephroma is unknown, but it is likely that it is considerably greater than is reported.

Cancer of the Kidney: Natural History and Staging

HOLLAND JM

Cancer 32(5): Nov 1973; 1030-1042

Extracted Summary

The natural history of renal cell carcinoma is kaleidoscopic. Growth may be indolent, intermittent, or rapid. The tumor may remain encapsulated for years. Ultimately it may invade intrarenal veins and lymphatics, thence to vena cava, aortic nodes, thoracic duct, and beyond. Spread to contiguous organs gives entry to portal and vertebral venous systems. Unusual metastases are common. Gross hematuria, loin pain, and mass occur together in only 10-15% and portend advanced neoplasm. Microscopic hematuria is found in about two-thirds. Non-specific signs and symptoms such as fatigue, weight loss, gastrointestinal symptoms, fever, and anemia are misleading. Fascinating clues such as hypercalcemia, erythrocytosis, hepatopathy, polyneuritis, acute left varicocele, etc., may alert the wary clinician.

Rare but titillating spontaneous regression of hypernephroma metastases, usually pulmonary and in older males, have occurred whether or not nephrectomy is done. About 60 cases have been reported. Understanding this apparent tumor-specific immunologic response may bring earlier

diagnosis and control of metastases. Selection of best treatment requires surveying metastatic sites. Accurate staging at operation and at the time of recurrence is imperative to help determine cause and correction of treatment failures.

Spontaneous Regression of Genitourinary Cancers

SCHIRMER HKA

National Cancer Institute Monographs 44: 1976; 19

Extracted Summary

In genitourinary cancers, spontaneous regression has occurred in few instances and for reasons unknown. Although it cannot be denied that nephrectomy may have promoted regression of distant metastases in some cases, this is an unproved relationship and, in any event, an extremely rare sequence.

Spontaneous Regression of Metastatic Renal Carcinoma

KIRK D

British Journal of Surgery 74(1): Jan 1987; 1-2

Extracted Summary

In the first article of Volume 74 of the British Journal of Surgery, a brief discussion of spontaneous regression of metastatic renal carcinoma is presented in which the author raises several questions about the phenomenon of spontaneous regression of tumours: Do the cases reported in the literature conclusively demonstrate that regression can occur? What is the mechanism for such regression? Could this mechanism be exploited in the treatment of cancer? What bearing does spontaneous regression have on the management of the condition and in particular should its possibility be borne in mind when treating a patient with an advanced renal tumour?

What is clear about renal carcinoma is the unpredictability of its behaviour. The author has a patient under his care who is alive and well over two and a half years after the diagnosis of pulmonary metastases from a renal tumour removed six months earlier. Prolonged survival can also occur in patients in whom the primary tumour is not removed. Idiopathic regression perhaps represents one further stage towards this end of the spectrum, a spectrum which unfortunately has at its other end the patient who dies within months of the removal of an apparently localized tumour.

DISAPPEARANCE OF PULMONARY METASTASES WITHOUT NEPHRECTOMY

Some Aspects of Renal Tumours with Special Reference to Spontaneous Regression

LJUNGGREN E; HOLM S; KARTH B; POMPEIUS R

Journal of Urology 82(5): Nov 1959; 553-557

Extracted Summary

A case is presented in which histologically verified, multiple metastatic nodules in the lungs disappeared spontaneously, without removal of the primary tumour in the kidney. The authors suggest that the spontaneous disappearance of pulmonary metastases may be due to an antibody reaction.

SELECTED CASE REPORT

The patient was a man, born in 1922, who consulted the E. N. T. department of the General Hospital of Vasteras because of headache and giddiness, the cause of which could not be found. In September, 1956, x-ray examination by Dr. Renander showed miliary shadows, up to twice the size of peppercorns, scattered diffusely in both lungs, and also some larger shadows with blurred outlines at the base of the left lower lobe. Besides these, there was a shadow at least the size of a walnut in the right hilar region. Two weeks later, x-rays showed an increase in the miliary dissemination. In November 1956, exploratory thoracotomy was performed by Dr. Rudstrom. Nodules varying from the size of a grain of corn to almost that of a hazel nut were felt over the whole surface of the lungs. Biopsy specimens were taken at three points. Histological examination showed that these were metastases of a hypernephroma. Renewed x-ray examination about a week later showed that the metastatic nodules had grown to about the size of hazel nuts, but the shadows in the lower lobe of the left lung had decreased somewhat in size.

The patient had no urinary symptoms. Urography showed broadening of the upper part of one kidney, so a renal tumour was suspected. In view of the metastases in the lungs, the surgeons refrained from nephrectomy. In March, 1957, the patient had haematuria, and angiography performed on this account showed a well-vascularized tumour in the right kidney. A renewed x-ray examination of the lungs was carried out on March 22, 1957 that is, 3 1/2 months after the previous one. This showed complete disappearance of the metastatic nodules in the lungs, but the nodule in the right hilar region remained. On May 7, 1957, nephrectomy was performed (Dr. Bruzelius). A tumour the size of a fist was found in the right kidney. Histological Examination: Hypernephroma.

On September 18, 1957, because of giddiness and headache with papilledema in the left eye, angiography of the left common carotid was carried out and showed that there was a remarkably vascular, rather rounded tumour the size of a mandarin in the left frontal lobe, containing very numerous vessels with remarkably rapid arteriovenous shunting of the contrast substance. The anterior cerebral artery was displaced about 1 centimeter to the right of the middle line. The tumour in the frontal lobe infiltrated and destroyed the base of the skull in the anterior cranial fossa over an area nearly the size of the tip of

the thumb, to the left side and a little in front of the sella turcica. From September 25 to October 26 the brain metastasis was treated with x-rays (Dr. Renander). Treatment was given over three fields (right side of the skull, with the rays aimed directly downwards, a left frontal field with the rays directed slightly upwards, and one over the vertex, in a sagittal direction. 2,700 roentgens were given in each field.

On January 10, 1958, that is, a good two months after the end of the x-ray treatment, angiography was performed again. There were no pathological vessels at the site of the metastasis seen on the previous occasion. In its place there was now, a poorly vascularized region in the frontal lobe, suggesting that the metastasis had become necrotic. The anterior cerebral artery, which had been considerably displaced, now lay practically in the middle line.

From January 13 to 30, 1958, the nodule in the right hilar region was treated with x-rays, and on May 7, 1958, x-ray examination of the lungs showed that it had become somewhat smaller. Apart from this the radiological picture of the lungs had not changed since the previous examination.

The patient died December 3, 1958. Postmortem examination showed no metastases in the lungs except one twice the size of a walnut in the right upper lobe near the hilum. A neighboring gland in the mediastinum was involved by the tumour. Apart from this there was a metastasis the size of a Spanish nut, and another the size of a golf ball in the remaining kidney. An interesting point was that the metastatic lesion in the frontal lobe of the brain was necrotic. The stroma showed the structure of a hypernephroma, but no tumour cells could be found. In the cerebellum, however, there was a cyst the size of a golf ball, into which a tumour the size of a cherry projected. Everything suggests that this is also a metastasis, though histologically it shows a more irregular structure than the metastasis in the lung. It is probably this tumour which caused the giddiness which led the patient to consult a doctor 3 years before his death.

In this case, then, there were multiple pulmonary metastases, all but one of which disappeared spontaneously. In addition, there was complete regression of the tumour in the frontal lobe of the brain after a moderate dose of x-rays.

Spontaneous Regression of Pulmonary Metastases Secondary to Carcinoma of Kidney

SAKULA A

British Journal of Diseases of the Chest 57: 1963; 147

Extracted Summary

A case is described of apparent spontaneous regression of widespread pulmonary metastases from carcinoma of the kidney, in a man aged 61. Similar cases have previously been reported but,

with one exception, have always followed nephrectomy. In the case described here, nephrectomy was not performed nor was any specific therapy given which might have caused regression of the metastases.

SELECTED CASE REPORT

A sports groundsman, W. N., aged 61, was seen for the first time and admitted to hospital on October 13, 1958. He had been ill for seven weeks. He had multiple non-specific symptoms. His weight had dropped from 18 stone (110 kilograms) to 16 stone (102 kilograms).

On clinical examination he was an obese very ill man. He was afebrile. There was no respiratory distress, although he looked slightly cyanosed. There were no other abnormal physical signs. A chest radiograph showed numerous opacities, some round and circumscribed, some of more irregular shape, of varying sizes (1/2-1 1/2 centimeters diameter) in both lung fields. A barium meal and follow-through and a barium enema were reported as normal. Other investigations were essentially normal. There were no red cells in the urine.

It was considered that the diagnosis was multiple metastases, probably secondary to a primary growth in the gastrointestinal tract, and disease in the urinary tract was not at that time considered. No specific treatment was given.

Six weeks later he was seen at follow-up. Surprisingly he looked improved. A chest radiograph showed a remarkable clearing of the lesions in both lung fields, except for

one small round focus in the right upper zone. He had no urinary symptoms.

He was seen again four weeks later, on December 29, 1958. He was so well that he was asking to return to work. A chest radiograph showed further clearing of the lesions in both lung fields. In January 1959 he developed pains in the left shoulder and arm, and radiographs of the cervical spine suggested that these were due to cervical spondylosis.

On February 4, 1959, he developed haematuria and pain in the left loin. His physical signs were unchanged. He died on February 10, 1959. At autopsy his respiratory system showed moderate bilateral bronchitis. In each lung there were three or four small, neoplastic deposits, each not exceeding 0.5 centimeters diameter, and some involving the visceral pleura. There was minimal bronchopneumonia at both lung bases.

Kidneys: There was malignant tumour, with the macroscopic appearance of hypernephroma, 4 centimeters diameter. The cause of death was ascribed to carcinoma of the left kidney, with metastases in the floor of the third ventricle, thyroid and lungs. Histologically, the tumours were pleomorphic, but essentially spindle cell primary carcinoma of kidney.

Renal Cell Cancer Part III: Types of Treatment

GRABSTALD H

New York State Journal of Medicine 64: Nov 15 1964; 2771-2782

Extracted Summary

Judicious and adequate therapy for the patient with renal cell cancer requires thoughtful consideration of different sets of circumstances. Age and physical condition of the patient are important, especially the cardiovascular and renal status and pulmonary function. After one decides that the degree of operative risk does not negate surgery in a particular patient, there are four vital factors to consider: (1) prognosis in the treated as contrasted with the untreated patient with renal cell cancer without demonstrable metastases; (2) prognosis in the treated as contrasted with the untreated patient with metastases; (3) the risk of the proposed surgery, especially when it is to include a vigorous attempt to remove all primary and metastatic tumor; and (4) availability of therapeutic alternatives to surgery, such as radiation and chemical therapy.

A number of cases of disappearance of metastases following nephrectomy have been documented. Those patients demonstrating spontaneous regression without benefit of nephrectomy are either infrequently observed or not reported.

SELECTED CASE REPORT

A striking example of apparently spontaneous regression occurred in a patient treated by Eugene Clifton, M.D., of Memorial Hospital. In October 1958, a 57-year-old Caucasian man was subjected to exploratory thoracotomy for pulmonary nodules. A diag-

nosis of widespread metastatic carcinoma of the lung and pleura was made. The lesions were of primary renal cell origin. Biopsy diagnosis was confirmed by Dr. Stewart of this hospital. Nephrectomy was never performed, although intravenous pyelograms revealed the right

kidney to be the probable source of the metastatic tumor. Numerous roentgenograms of the chest since thoracotomy have revealed no evidence of metastatic disease. The last films were made in 1963, almost five years after thoracotomy, and they showed normal findings. Recent intra-

venous pyelograms demonstrate no change from that observed in the original films. The patient died suddenly of unknown cause five years after surgery. Autopsy was not performed.

Spontaneous Regression of (Presumably) Pulmonary Metastases in A Patient with Renal Clear-Cell Carcinoma

MEINDERS AE

Folia Medica Neerlandica (Netherlands Journal of Medicine) 14(2): 1971; 53-61

Extracted Summary

Regression of pulmonary metastatic nodules from a carcinoma of the kidney occurs infrequently. Most observations deal with disappearance of pulmonary metastases after removal of the renal carcinoma, but regression of pulmonary metastatic disease has also been described without prior removal of the primary renal carcinoma. Finally, metastatic pulmonary lesions have been observed to appear after nephrectomy and to disappear spontaneously later. In this context the unusual behaviour of presumptive pulmonary metastases in a patient with a renal clear-cell carcinoma seemed to be of sufficient interest to report. Without the removal of the primary tumour the metastases disappeared radiologically.

About nine months later, before radical nephrectomy, new pleural pulmonary lesions were found. These lesions were histologically proven metastases from the primary renal clear-cell carcinoma.

SELECTED CASE REPORT

In July 1967 a 68-year-old man (H.M., no. 927/69) was presented at the outpatient department because of abnormal findings on a routine x-ray of the thorax. It was highly suspect of multiple metastatic nodules in both lungs. This diagnosis was made independently by two different experienced radiologists.

Except for a slight dyspnoea upon exertion and a dry cough for many years (he was a moderate smoker) he had no respiratory complaints. In 1946 his gallbladder was removed because of cholecystitis. Since then vague upper abdominal discomfort and slight heartburn had existed. There were no other gastrointestinal complaints. No change in the pattern of defecation had been noticed. Micturition was normal, the urine was clear and the patient had never observed haematuria. He did not report pain in the lumbar region.

At physical examination his body weight was 73.5 kilograms and his height 1.69 meters. There was no recent weight loss. He was a nervous man in good general condition. His heart rate was 90 beats/minute. A slight hypertension was found: blood pressure 190/100 mmHg. The central venous pressure was normal. No abnormal lymph nodes were palpable. The head and neck were normal. With the exception of a few bronchitic râles no abnormalities were found in the thorax. The liver was slightly enlarged with a regular but blunt margin. Palpation of the abdomen revealed no abnormalities; the

kidneys in particular could not be palpated. The testes were normal at palpation. Rectal examination (digital and sigmoidoscopy, up to 20 centimeters) revealed no abnormalities.

Laboratory findings: the urine was acid (pH 5.8) and had a specific gravity of 1.018. A slight proteinuria was found (Bang reaction 2+). There was no glucosuria. In the urinary sediment no abnormalities were seen, in particular no microscopic haematuria. Blood chemistry: July/August 1967; ESR, 10/24 mm/hour, (normal, 10/20) Hb 14.6 gm/100 ml, (normal 13.5) Creatinine 9.8 mg/l, (normal <10) Alkaline phosphatase 7.5 U/l (normal <8). Acid phosphatase 0.4 U (normal upper limit 0.6U). The reaction for occult blood in the stool was repeatedly negative. No sputum was produced. Planigraphy of both lungs showed no evidence of a primary bronchogenic carcinoma and confirmed the idea of multiple pulmonary metastatic disease. Esophagus, stomach and duodenum were normal on upper gastrointestinal x-rays.

Since the patient had no complaints and there seemed to be no hope for curative therapy, no further examination was carried out to find the primary site of the tumour. At this time the possibility of a renal carcinoma was not considered. Control x-rays of the thorax in August and November 1967 showed a gradual increase in the size of the pulmonary shadows. After November 1967 the patient

did not return for follow up. He had no complaints and the laboratory tests gave normal results at that time.

In April 1969 he returned to the out-patient department because of increasing dyspnoea upon exertion. His body weight was 76.6 kilograms and physical examination gave the same results as in 1967. Blood pressure was now 210/110 mmHg. The laboratory findings were within normal range except for a slight elevation of the plasma creatinine (12.2 mg/l), indicating a small decrease in glomerular filtration rate. Other blood chemistry was: ESR 10/25 mm/hour, Hb 15.1 gm/100 ml, Alkaline phosphatase 5.2 U/l. Only a sporadic red cell was seen in the urinary sediment. Radiology of the chest showed the signs compatible with a slight left-sided heart failure. To our surprise, all previous (presumably) metastatic pulmonary shadows had vanished but a new small shadow had appeared in the right upper quadrant. He was treated with a salt-restricted diet, diuretics and digoxin. His complaints disappeared. At further examination to reveal the origin of his hypertension, radio-isotope renography revealed a non-functioning left kidney. The intravenous pyelogram was compatible with a partly calcified carcinoma of the left kidney. The diagnosis was further substantiated by arteriography of the left renal artery.

The decision was made to remove the left kidney. The patient gave his consent but not before the beginning of 1970. A pre-operative chest x-ray revealed the appearance of two round dense shadows in the right lung situated near the pleura. These shadows were interpreted as pulmonary metastatic disease originating from the renal carcinoma. The new shadows had a location different from the lesions seen in 1967. In spite of these findings the left kidney was removed on 2nd February 1970. During operation (Prof. Dr. W. van Enst; transabdominal transperitoneal approach) no metastatic carcinoma was found either locally or in the liver. The left kidney was removed without difficulty.

Pathology (Dr. C. Granillo): the kidney measured 15 x 8 centimeters and had a total weight of 500 grams. A partly cystic, partly compact tumour was found, at one site growing into the perirenal fat. Microscopic examination showed a typical renal clear-cell carcinoma (Grawitz tumour) with relatively few mitoses, and foci with necrotic tissue, inflammatory reaction and necrosis. There was no in-growth into the renal vessels or beyond the perirenal fibrous capsule.

Immunological investigation (Dr. Ph. Rumke): An indirect membrane immune-fluorescence test was

performed with a cell suspension of the renal carcinoma and serum of the patient and 11 different control sera (normals 2, patients with melanoma 8, patient with malignant reticulosis 1). Sixteen per cent of the tumour cells showed positive fluorescence with serum of the patient as compared to a mean of 3% (range 1-6 %) with the control sera. The percentage (16) is too low to speak of a positive reaction. Moreover, no control tests were performed with the same sera on normal and other tumour cells. Therefore no conclusions can be drawn as to the presence of specific antibodies to the membrane of the tumour cells. All we may say is that such presence is certainly not excluded.

The postoperative course was uneventful except for a bronchopneumonia which was easily managed with penicillin. During the months following the nephrectomy the two pulmonary shadows slowly increased in size. In June 1970 a continuous aching pain developed which resembled a neuralgia of the intercostal nerves, possibly as a result of local in-growth of the tumours. Since surgical removal of the tumours seemed possible, a thoracotomy (Prof. Dr. W. van Enst) was performed on 20th July 1970. Two tumours measuring about 10 x 7 centimeters were found at the site consistent with the radiological localization. The tumours were firmly attached to both pleural sheaths. Several smaller tumours were found on the parietal pleura.

Histological examination of a biopsy from one of these tumours showed a clear-cell carcinoma identical to the one removed in February 1970 (Prof. Dr. J.F. Hampe). Obviously the pleural tumours were metastatic disease from this tumour. Since no radical surgical approach was possible the operation was terminated.

The postoperative course was again uneventful. The pain still existed. It was considered worth trying to suppress the pain by radiotherapy, the more because cytotoxic therapy is generally considered of little value in renal carcinoma and its metastases. In August 1970 a total tumour dose of 4,000 rad was given during 3 weeks (Dr. H.A. van Peperzeel). Except for transient thrombopenia, no side effects were seen. The treatment was followed by almost complete disappearance of the pain in the 3 months thereafter. On December 17, 1970 the radiological size and shape of the pleural metastases were unchanged in comparison with the immediate postoperative findings. In December 1970 the patient was in good general health with only slight dyspnoea upon exertion and vague discomfort at the site of the thoracotomy.

Spontaneous Regression of the Metastasis of Renal Carcinoma

GUTIERREZ FUENTES JA; FERNANDEZ REMIS JE; SILMI MOYANO A; TOME PAULE C
Revista Clinica Espanola 158(3-4): Aug 15-31 1980; 163-166

Extracted Summary

Cancer of the kidney consists mainly of primary tumors that affect the organ; they originate in the proximal portion of the renal tubules and make up 70-80% of all renal tumors.

A large proportion of the patients with renal carcinoma are diagnosed as metastasis carriers on their first medical visit. Various authors have stated that 25-57% of the patients with renal cancer have undergone metastasis before the initiation of any treatment. Spontaneous reversion of this type of metastasis, following excision of the primary tumor, has been operationally defined as the partial or complete disappearance of the said tumor and is not synonymous with its cure. This type of regression will invariably depend on the aggressiveness of the tumor and the capacity of the patient to respond to the disease.

The infrequency of spontaneous reversion is discussed by Holland (*Cancer* 32 (1979) 1030) who has collected sixty clinical cases, of which the majority of spontaneous reversions occur after removal of the kidney. Only three of these cases occurred without previous removal of the kidney. The total incidence of this phenomenon, evaluating the information obtained from nine different authors, suggests an incidence of spontaneous reversion of 0.8%.

The case we are going to describe concerns a sick woman with spontaneous regression of multiple metastases of the lung, which were a result of renal carcinoma which was diagnosed histologically. The kidney in this case was not removed.

SELECTED CASE REPORT

A 72-year-old woman, T.T.G., who, 4 months before admission, showed general symptoms of discomfort, anorexia, asthenia and loss of weight. Upon consultation with a doctor, a diagnosis showed UCL and diabetes. We have continued to control her diabetes and treat the decubitus ulcer.

The physical examination demonstrated normal nutrition, skin coloration and mucosa. Skull normal, with a normal cranial pattern. Eyes: normal and normally reactive. Neck: Thyroid: cannot palpate the left lobe, the right lobe palpates much enlarged and consistently multinodular. No adenopathy, venous pressure normal. Thorax: Mammaries normal, AP normal, AC normal at 90/minute, Blood pressure 100/70. Abdomen: a large decubitus ulcer of 6 centimeters in diameter is in the sacral region. Extremities normal. Pulses palpate peripherally. Tendon reflexes conservative.

Lab Report: The blood analysis showed a Hb of 11.8 grams; Leukocytes 83,000, GPT, LDH, uric acid, urea, all lipids, cholesterol triglyceride, Ca, P and proteinogram are within normal limits. Immunoelectrophoresis normal. Hemostasis study shows pronounced fibrogen. The bone marrow was normal in our 3 series without observing micrometastasis. The urine showed Albumin 0.571 and Hb++ with sediment containing abundant flora, purulent cells cylindrical, granular and micromature; Culture of

urine, many colonies of *Serratia*, clearing creatinine: 68/mm/ml. Urinary osmolarity 246 mOs/Kg. Back (bottom) of the eye arterial sclerosis, some dry exudate, senile cataract in development; EEG: change in fascial lesion of left temporal cortex. ECOE normal. ECG: enlargement of left and right ventricles with alternations of the repolarization. Functional study and gammagraphy of the thyroid: right lobe enlarged and multinodular, unobtrusively declining functionally. Tests of lymphoblast transformation: 1B:028.

July 7, 1978, a radiological study of the thorax showed the existence of multiple nodules at the level of the pulmonary parenchyma, compatible with the existence of metastasis. The gastroduodenal study showed no pathological alterations. The bone series was normal. Pyelography demonstrated the presence of a terminal mass superior to the left kidney, not homogeneous after the injection of the assay which suggested a vascularized tumor with necrotic areas. The mass rejected the calcium and the corresponding renal pelvises without any evidence of invasion of the right kidney. The excretory paths show a vascularized mass in which there were signs of entrapped blood vessels and was diagnosed as renal adenocarcinoma. August 24, 1978, a new radiological study of the thorax clearly demonstrated a notable decrease of the large pulmonary metastasis which made radiologic detection impossible.

A transpleural biopsy of one of the chance metastases showed metastasis of adenocarcinoma. After these findings it was decided to utilize chemotherapy to extirpate the tumor. Nevertheless, 2 days later the sick woman suddenly showed a distinct change with decreasing stress so that chemotherapy was not performed. After 2 months most of

the pulmonary metastases were diminished in size and others had disappeared. It is of particular interest to note that the metastases disappeared without surgery or treatment of the primary tumor.

(Noetic Sciences translation)

Spontaneous Regression of Pulmonary Metastases of a Hypernephroma

VIVILLE C

Acta Urologica Belgica 49(3): 1981; 371-376

Extracted Summary

Presented is one case of spontaneous regression of pulmonary metastases of hypernephroma.

The real frequency of spontaneous regressions of metastases of hypernephromas is difficult to access for a number of reasons. In some cases, histological proof of the metastatic nature of the lesions is absent; it is impossible to know the number of cases in which clinical and radiological pulmonary metastases exist, and neoplastic sites can remain quiescent for a large number of years.

The most interesting aspect of spontaneous regression of pulmonary metastases of hypernephroma is, of course, elucidation of its mechanism. Several preliminary observations are made: (1) the relationship between nephrectomy and regression of metastases is not obvious since, in some cases, regression preceded nephrectomy; (2) a large majority of spontaneous regressions are pulmonary metastases of Grawitz tumors; and (3) the predominance of males in which the regression occurs is quite marked: 38 out of 51 are in the work of Freed, Halperin and Gordon (*J Urol*, 118: 1977; 538-542).

Freed has also hypothesized that several mechanisms might account for spontaneous regression of metastases: (1) fever; (2) infection, especially tubercular infection; (3) trauma of operation; (4) diminution of blood flow to secondary sites; (5) suppression by nephrectomy of an unknown "cancerogenic" factor; (6) hormonal factors; and lastly; (7) immunological factors.

SELECTED CASE REPORT

Mrs. Eve M., 52 years old, in December of 1978 presented with a discharge from the left lung and pains in the mid-thorax region. Radiographs of the thorax showed the presence of metastatic shadows in both pulmonary fields. The search for the primary tumor revealed a totally asymptomatic one on the superior pole of the left kidney. Retrospectively, this tumor was already visible 6 years earlier (1974) on an intravenous urogram performed for cystitis. On account of the pulmonary metastases and the asymptomatic nature of the primary tumor, a nephrectomy was not performed nor was any other treatment (chemo or radiotherapy). However,

successive radiographs of the lungs revealed a spontaneous regression of the suspect shadows which, in the spring of 1980 totally disappeared. Arteriography of the kidney on April 16, 1980, confirmed the diagnosis of a malignant tumor of the left kidney. On May 21, 1980 a left nephrectomy was performed; it revealed Grawitz tumor with neoplastic lesions (histologically confirmed) in the left renal vein. Following the operation, there were no complications. In June 1981, radiography of the thorax showed a suspicious parahilar opacity without an abnormal shadow in the pulmonary fields.

(Noetic Sciences translation)

Spontaneous Regression of Pulmonary Metastases from Renal Adenocarcinoma Before Nephrectomy

CHAPPLE CR; GANNON MX; SHAH VM; NEWMAN J

British Journal of Surgery 74(1): Jan 1987; 69-70

Extracted Summary

The rare phenomenon of spontaneous regression of metastatic carcinoma is reported most commonly in association with renal adenocarcinoma. In 61 of the 68 reported cases the lungs have been the site of metastatic disease, and in only six of these cases had regression been reported before treatment. We report a further such case, and discuss the associated reversible hepatic dysfunction.

SELECTED CASE REPORT

A 57-year-old man was referred to hospital in June 1983 with intermittent claudication, hypertension and proteinuria. Clinical examination demonstrated hepatomegaly and chest x-ray showed appearances consistent with pulmonary metastases. The patient had no history of chest disease or exposure to tuberculosis. Isotope liver scan confirmed hepatomegaly and demonstrated irregular uptake suggestive, but not diagnostic, of hepatic metastases. Laboratory tests revealed a hemoglobin of 10.4 gm/dl, white cell count of $12.5 \times 10^9/l$, ESR 125 mm/hour, albumin 21 gm/l, globulin 46 gm/l, alkaline phosphatase 343 units/l (normal: 100-280 units/l) with normal bilirubin and transaminases. Intravenous urography showed downward displacement of the right kidney due possibly to hepatomegaly. CT examination revealed that the right kidney was displaced by a posterior renal

mass but no liver metastases or ascites were shown. A CT scan of thorax was not carried out. A second chest x-ray in November 1983 showed spontaneous regression of the presumed pulmonary metastases. Repeat laboratory investigations revealed haemoglobin of 16 gm/dl, ESR 12 mm/hour, white cell count $11 \times 10^9/l$, albumin 29 gm/l and the liver function tests had returned to normal. Following arteriography, a right nephrectomy was performed later that month, when a renal adenocarcinoma with very extensive necrosis was removed.

On routine investigation in May 1986, in the absence of any clinical symptoms, chest x-ray showed a single round opacity in the left midzone suggesting recurrent metastatic disease. Liver scanning using isotope and ultrasound techniques demonstrated no parenchymal abnormality.

DISAPPEARANCE OF PULMONARY METASTASES AFTER NEPHRECTOMY

The Apparent Disappearance of Pulmonary Metastasis in a Case of Hypernephroma Following Nephrectomy

BUMPUS HC JR

Journal of Urology 20: 1928; 185-191

Extracted Summary

A discussion of the disappearance of pulmonary metastasis after nephrectomy for hypernephroma is presented along with a review of the phenomenon in several cases reported to the author in personal communications. A discussion of eight cases is presented.

SELECTED CASE REPORT

A man, aged fifty-nine, on whom nephrectomy had been performed fifteen months previously, presented himself complaining of chronic cough with occasional bloody sputum. He gave a history of three attacks of transitory hemiplegia followed by dragging of

the left foot. At the time of nephrectomy the pathologists reported: "Hypernephroma 7 by 6 centimeters, with destruction of half of the kidney, the tumor filling the pelvis and extending into the pedicle and a metastatic tumor 2.5 centimeters in the perirenal fat."

A roentgenogram of the chest disclosed multiple metastatic areas in both lungs. As the outlook was so discouraging and the patient anxious to return home a neurological examination was not made, and it was assumed that the attacks of hemiplegia were due to cerebral metastasis similar to that in the lungs. With temerity I presented an optimistic attitude and explained to the patient that as so little could be done to mend matters he had best try to forget his condition and go home and carry on. This he did so well that five months later (September 1925) while touring he called to report that he had gained

in weight, was doing full work, and considered himself in perfect health. At my request he stayed long enough to have roentgenograms made of his chest; as may be seen all evidence of the former metastatic nodules had disappeared.

In April 1928, more than four years after the removal of the primary growth, the lungs were still clear and there were no other signs of metastasis. At a recent examination more than five years after the operation, he appeared in excellent health, and visited the Clinic while on a trip through the Northwest.

Spontaneous Disappearance of Pulmonary Metastases After Nephrectomy for Hypernephroma

Four-Year Follow-Up

MANN LT

Journal of Urology 59: 1948; 564-566

Extracted Summary

Spontaneous disappearance of multiple pulmonary metastases of hypernephroma is rare, but several cases have been reported.

A case of spontaneous disappearance of pulmonary metastases following nephrectomy is reported.

In addition to the case reported in this article, the authors have seen 2 patients with solitary lung shadows interpreted as metastatic tumor by the radiologist. In both cases the shadow disappeared after nephrectomy for hypernephroma.

SELECTED CASE REPORT

A male (S. B., No. 514000), aged 62, was admitted to the Mount Sinai Hospital on December 7, 1943, with an 8-months' history of progressive weakness, productive cough with dark sputum, and loss of weight. Physical examination revealed a pale, thin, elderly man, with negative findings except for marked secondary anemia. Urinalysis, blood chemistry, and Wassermann reaction were normal. An x-ray of his chest showed multiple metastatic nodules, 1 to 4 centimeters in diameter scattered throughout both lungs.

An intravenous pyelogram, taken in search for a primary focus, showed a mass compressing the calyces of the lower pole of the left kidney, typical of tumor. This was confirmed by retrograde pyelogram.

On December 22, 1943, a left nephrectomy was performed. A tumor, the size of an orange, was found occupying the mid-portion of the kidney. The pathological report of the specimen was "malignant Grawitz tumor (hypernephroma) with invasion of the small veins and lymphatics." The postoperative course was uneventful, and

the patient left the hospital January 3, 1944, twelve days after operation.

On February 19, 1944, about 7 weeks later, an x-ray of the chest showed larger and more extensive pulmonary metastases. On April 1, 1944, the patient was reexamined, and his condition appeared worse. He returned on December 2, 1944, and was found to have gained some weight. He failed to report again until September 1, 1945, when he stated that he had had a cough with frank hemoptyses during the summer, but gained weight. An x-ray of his chest on September 1, 1945, showed complete disappearance of the nodules. We next saw him on October 6, 1945, when he stated that there had been no further hemoptysis. He appeared to be in better health, and had gained weight.

On April 6, 1946, September 1, 1946, and on October 4, 1947 an x-ray of the chest continued to show the lungs free of metastases. X-ray of the bony pelvis and long bones taken on December 7, 1946 was negative.

Spontaneous Disappearance of Pulmonary Metastases Following Nephrectomy for Hypernephroma

ARCOMANO JP; BARNETT JC; BOTTONE JJ
American Journal of Surgery 96: Nov 1958; 703-704

Extracted Summary

A case of spontaneous disappearance of pulmonary metastases over a period of eight months following nephrectomy for a hypernephroma is reported. The patient has had no recurrent pulmonary metastases in three years.

SELECTED CASE REPORT

A male clergyman (M. K.), age 37, was admitted to St. Peter's Hospital on January 19, 1955, complaining of hematuria which had been present intermittently for the previous year. It had been severe and persistent for four days prior to admission. The patient denied any history of abdominal pain, dysuria, frequency, nocturia, weight loss or weakness. Physical examination revealed a well-developed white man with no other positive findings except for a large mass occupying the right upper quadrant of the abdomen which felt nodular and appeared to be the size of a grapefruit. It was the clinical impression at this time that this was a renal tumor.

On January 22, an intravenous pyelogram demonstrated a mass, incompletely distorting the inferior renal collecting structures of the right kidney, consistent with that seen with a renal neoplasm.

An x-ray film of the chest taken on the same day revealed multiple metastatic nodular deposits in both lung fields, the largest of which was seen in the left lower lobe in the retrocardiac space.

On January 27, right nephrectomy was performed. At surgery a large tumor completely replacing the lower pole of the right kidney was identified, with no contiguous spread to adjacent viscera or perirenal soft tissue. The patient had an uneventful postoperative course.

The pathological specimen demonstrated that the

kidney was replaced by a nodular growth measuring 66 by 10 by 6 centimeters and the substance of the kidney was occupied by multiple small nodules which coalesced in areas and completely distorted normal renal collecting system structures. There was invasion of the pelvis and calyces and on cut section the tumor appeared fibrous and yellowish white. Microscopic sections revealed the neoplasm to be a clear-cell carcinoma.

The patient remained well until October 30, 1956, at which time he was again admitted to St. Peter's Hospital complaining of headaches of approximately six weeks' duration. One week prior to admission, the headaches became severe and were associated with dizziness. The only positive physical finding at this time was the presence of bilateral papilledema.

A neurosurgical consultant saw the patient at this time and thought that the patient had a metastatic lesion within the brain. Craniotomy was performed and a metastatic lesion removed from the brain. The patient made an uneventful postoperative recovery and has remained asymptomatic for approximately seventeen months.

An x-ray film of the chest taken on October 11, 1955, demonstrated that the previously described nodular metastatic lesions in both lung fields had completely disappeared.

Spontaneous Remission of Metastatic Renal Cell Adenocarcinoma: A Case Report

HALLAHAN JD
Journal of Urology 81(4): April 1959; 522-525

Extracted Summary

The remission of metastatic lesions without therapy is such a fortuitous event that each case should be documented for what information it may provide.

In a case of a 75-year-old man with adenocarcinoma of the left kidney and local and pulmonary metastasis, pulmonary metastatic lesions spontaneously regressed after nephrectomy and remained absent two years nine months after surgery. Postulations as to the cause of regression are discussed. The case report illustrates the virtue of removal of a parent renal tumor, despite evidence of extensive metastasis.

SELECTED CASE REPORT

A 75-year-old white man was enjoying good health and working full time as a clerk until one week before first medical consultation, when he suffered a nonradiating pain in his left flank and had to pass much flatus. Two days later, he first noted hematuria and sputtering urination with the passage of clots. At this time his left flank pain was associated with urinary urgency. There had been no weight loss, cardiorespiratory or gastrointestinal disorders prior to this illness. There was no family history of malignant disease. The only previous medical history was that of tonsillitis as a boy.

Physical examination showed a well-nourished, moderately obese, well-oriented and well-preserved man. There was a small (0.5 centimeter diameter) basosquamous cell carcinoma of the skin of the scalp. The chest was emphysematous but otherwise normal on auscultation and percussion. The heart sounds were of good tone with harsh mitral and aortic systolic murmurs. The abdominal examination revealed a firm, slightly movable and tender left renal mass about 8 centimeters in diameter. There were also a large reducible right inguinal hernia and a varicocele in left side of scrotum. The prostate was slightly enlarged, firm and symmetrical.

Laboratory studies showed the hemoglobin to be low and dropping from 12.5 grams to 10.5 grams during his first week in the hospital. During this time hematuria persisted. The remainder of the complete blood count, the blood sugar, blood urea nitrogen and creatinine were within normal limits.

X-ray of chest revealed at least five, or possibly more, metastatic lesions throughout both lung fields. Intravenous urography showed a normal right kidney and non-functioning left kidney. Retrograde pyelography showed a normal right kidney and a mass lesion in the lower pole of the left kidney. The roentgenologist (Robert J. Ayella, M.D.) went on to add: "In view of the great number of metastatic lesions of the chest, it would not be practical to attempt to treat this with x-ray therapy."

A left nephrectomy was performed by Thomas Birdsall, M.D. and the following are the gross and histological findings. The gross specimen consisted of the left kidney which weighed 334 grams. Externally protruding out from the lower pole laterally was a smooth surfaced, lobulated mass of tissue extending approximately 5 centimeters out from the point that would normally represent the margin of the kidney. This mass was firm though not actually hard. It seemed to be encapsulated with a capsule which was continuous with that of the kidney. Bulging out under the capsule were several lobular yellowish structures which bulged out approximately 3 to 4 millimeters. On cut surface the aforementioned mass measured 7 centimeters in diameter and was spherical in shape. Around the peri-

phery were yellow lobules each one measuring approximately 10 centimeters in diameter. Their color was that of the normal adrenal cortex. In the center of this spherical tumor mass there was pale tissue which resembled gelatin in appearance yet was not soft like gelatin neither was it hard, lying somewhere in between. There were bands of yellowish material running through this and resembled the lobules previously described. The lower portion of the kidney was normal in appearance except for a pale cortex. Also submitted was a mass of perirenal fatty tissue measuring 10 centimeters when compressed into a disc. One surface of this was smooth and appeared to be the capsular portion of the kidney which was over the kidney. No nodes could be found in the perirenal fatty tissues.

Microscopic study of sections through the various masses showed a neoplasm composed of malignant tumor cells sometimes arranged in cords, in other areas arranged in diffuse sheets. The neoplastic cells exhibited oval vesicular nuclei which showed some variation in size and staining qualities, and usually abundant cytoplasm. In some areas the cytoplasm was vacuolated and clear, while in other areas it contained fine granules. The histologic appearances were those of a renal cell carcinoma (hypernephroid carcinoma). One nodule in the perirenal adipose tissue showed a similar type tumor. The preserved renal parenchyma exhibited a few scattered hyalinized glomeruli, the remainder being essentially normal. Vascular thickening and hyalinization were also encountered. Diagnosis: Renal cell adenocarcinoma (hypernephroid carcinoma of left kidney and perirenal fat).

The patient made an uneventful recovery and returned to his usual business. When last seen (2 years postoperatively) he stated that he had not lost a day from work.

X-rays taken 18 and 24 months after operation showed no metastatic disease in chest. An intravenous urogram and another chest film two years later showed a normal functioning right kidney and clear lung fields. A complete history and physical examination 3 years later showed no new findings. His weight was the same. A repeat of laboratory studies revealed results within normal limits along with a normal sedimentation rate. No medication was given other than 500 cc whole blood preoperatively, a short course of feosol spansule, one b.i.d. for six weeks postoperatively and penicillin parenterally for an episode of tracheobronchitis six months after surgery. The patient died October 3, 1958. A complete postmortem examination was made. No metastatic lesions were seen in the skull or viscera. According to Dr. R. Philip Custer, pathologist at Presbyterian Hospital, death was caused by congestive heart failure due to arteriosclerosis and hypertensive cardiovascular disease.

Spontaneous Disappearance of Bilateral Pulmonary Metastases

Report of a Case of Adenocarcinoma of Kidney after Nephrectomy

KESSEL L

Journal of the American Medical Association 169(15): April 11 1959; 121-123(1737-1739)

Extracted Summary

A 65-year-old man, hospitalized because of general weakness and striking weight loss, was found by roentgenography to have pulmonary lesions suggesting metastases of a tumor. Intravenous pyelography gave evidence of a malignant tumor of the left kidney. A nephrectomy was performed, and the lesion proved to be a clear-cell serous papillary cystic adenocarcinoma. The condition of the patient remained poor for about three months, and the pulmonary lesions increased in size and number. The patient then improved, and at the time of discharge from the hospital the pulmonary lesions were no longer visible. Similar observations have been made in the past. They suggest the hypothesis that these tumors have distinctive properties as to origin and biological activity.

SELECTED CASE REPORT

A 65-year-old man was admitted with the chief complaints of general weakness and loss of 20 pounds (9.1 kilograms) of weight in the four weeks before admission. He had been treated in this hospital in 1952 for a left-sided hemiparesis due to cerebral thrombosis, with complete recovery after six months of treatment. He had had no other disease until the present admission.

Physical findings on admission were essentially unremarkable. The chest x-ray showed several bilateral nodular densities considered to be metastatic lesions. A series of x-ray studies of bone showed no further metastases. Laboratory findings were essentially within normal limits, except for a leukocyte count of 19,920/mm³ with a normal differential count, and 12 erythrocytes per high power field in the urine sediment.

In search for a primary tumor intravenous pyelography was performed and the findings showed evidence of

a malignant tumor of the left kidney. A nephrectomy was performed and a clear cell serous papillary cystic tumor (papillary adenocarcinoma) was found. The patient's general condition remained poor for three months post-operatively. A roentgenogram of the chest made two months after surgery showed the metastatic nodules increased in size and number. During the next several weeks the patient started to improve slowly and a chest x-ray made three months after operation showed striking regression of the multiple nodular lesions. The patient continued to improve and gained 20 pounds in weight. A chest x-ray made four months after operation showed complete clearing of both lung fields. The patient was discharged and was followed up on an outpatient basis. The last roentgenogram of the chest, made seven months after operation, showed both lung fields to remain clear.

Regression of Pulmonary Metastasis Following Nephrectomy for Hypernephroma

Eight-Year Follow-Up

JENKINS GD

Journal of Urology 82(1): July 1959; 37-40

Extracted Summary

A case of adenocarcinoma of the kidney, with regression of lung metastasis 8 years following nephrectomy, has been presented. Biopsy of the pulmonary metastatic nodules was not done. There seems to be no doubt of their origin, as there was gross and microscopic evidence of tumor tissue in the renal blood vessels, and metastatic nodules in the perirenal fat. This case is similar to the one reported by Mann, in that the metastasis was present at the time of nephrectomy. There is no answer as to why the metastasis regressed, only speculation.

SELECTED CASE REPORT

A 57-year-old white man (O.J.K., No. 50-3255), was admitted to Mercy Hospital on October 27, 1950, with the following history: The evening of October 26, following work driving a road maintainer, a dull ache was present in the left flank. This was the first time such a pain had been noted, and was thought to be due to muscle strain or to jolting associated with his work. The pain, however, increased in intensity during the night, and by early morning was quite severe, with referral to the left lower quadrant and left testis. His family physician was called and morphine was administered for relief of pain. He was admitted to the hospital with a tentative diagnosis of renal calculus.

The patient was in excellent physical condition. Heart, lungs and abdomen were normal. The prostate was normal. Laboratory studies were within normal limits. Intravenous urograms showed a normal right kidney, with poor filling of the left kidney. During this procedure, the pain in the left flank suddenly disappeared and was followed by the voiding of bloody urine containing several fishworm-like clots. This was the first time that blood had appeared in the urine. Bilateral retrograde pyelograms showed that the right kidney was normal, and the presence of a filling defect in the lower pole on the left. Two days later the left retrograde pyelogram was repeated. The same filling defect was noted in the lower pole, considered typical of renal tumor. Chest x-ray showed metastatic nodules in both lungs.

There was no question of the diagnosis following the second retrograde pyelogram, especially after finding metastatic nodules in both lungs. The problem was one of treatment. Should a palliative nephrectomy be done? The patient and his wife, being intelligent people, were told the diagnosis, and they elected nephrectomy, on the premise that he would at least be free of renal pain, even though lung metastasis was present.

November 2, using cyclopropane anesthesia, left nephrectomy was accomplished without difficulty. The tumor had broken through the capsule and invaded the perirenal fat, which was removed with the kidney. The renal vein contained tumor tissue.

Pathologic report (Dr. Mark C. Wheelock): Specimen consisted of a completely removed kidney and portions of attached perirenal fat, which weighed 364 grams and measured 13 by 9.5 by 6 centimeters. One pole was distort-

ed by numerous light tan, irregular lobules projecting above the surface of the kidney. On section, the majority of the kidney had been replaced by multiple lobulated tumor tissue. Some of the lobules were light gray-yellow, while others were hemorrhagic and gelatinous to necrotic. The tumor had an internal diameter of 8.5 centimeters. Uninvolved kidney tissue measured approximately 5 by 5.5 by 4 centimeters. The pelvis was found to be markedly distorted by invading tumor tissue. The ureter was opened, the lining was finely trabeculated and gray. The perirenal fat tissue was dissected and there were nodules of gray tumor tissue ranging up to 0.5 centimeters in diameter. Diagnosis: Adenocarcinoma of kidney with invasion of pelvis and blood vessels; chronic pyelitis.

The postoperative course was uneventful, and postoperative x-ray therapy was not used. The patient was dismissed from the hospital November 17, 1950.

The spring of 1951, the patient's wife committed suicide, using carbon monoxide from the family automobile. Her suicide was attributed to worry over her husband having cancer—even though he was in good health, and working every day.

X-ray of chest, October 1951, one year following nephrectomy, showed increase in size and number of metastatic nodules. His general health was good. Chest x-ray in July 1952, 2 years following nephrectomy, showed increase in size and number of the metastatic lung nodules. His general health was good.

May 22, 1954, four years following nephrectomy, the patient was readmitted to the hospital because of nausea, vomiting and epigastric pain. X-ray studies showed a large, perforating type ulcer on the posterior wall of the stomach, and stenosing duodenal ulcer with 80% retention of barium. X-ray of the chest showed marked regression of the metastatic nodules.

June 4, 1954, partial gastrectomy with Hoffmeister posterior gastrojejunostomy was done by Dr. C. J. Lohmann. Pathologic report: Gastric ulcers, benign, active. The postoperative course was not remarkable, and the patient was dismissed from the hospital on June 16, 1954.

Since his last hospitalization in 1954, he has remained in excellent health. He has been working steadily and says he has never felt better. X-ray of the chest in May 1958 showed marked regression of the metastatic nodules, with one small nodule remaining.

Spontaneous Disappearance of Lung Metastases in a Case of Kidney Carcinoma (Hypernephroma)

NICHOLLS MF; SIDDONS AHM
British Journal of Surgery 47: 1960; 531-533

Extracted Summary

Regression or disappearance of carcinoma has occasionally been reported. Everson and Cole (1956) analyzed a series of 600 cases, of which in their opinion 47 had been absolutely proved.

Of these only 2 were renal carcinoma. Recently Hallahan (1959) has reported a remarkably similar case, in which pulmonary metastases from a renal carcinoma regressed spontaneously following nephrectomy. In the case here reported the histological proof is not complete, but in our opinion it is otherwise firmly established.

SELECTED CASE REPORT

A bus driver (J. C.), aged 55 years, presented in November 1955, complaining of swelling in the left sac of the scrotum for a year, undue fatigue for three months, and a cough for years, recently productive of yellow sputum. On examination the following abnormalities were found: a left varicocele, a grossly enlarged palpable left kidney, a blood-pressure of 200/120, and Hb 18.3 grams (124%). The ESR was 1 mm/hour (Wintrobe), and microscopy of the urine revealed no abnormality. Radiography of the renal area revealed calcification in the lower pole of the enlarged left kidney. The diagnosis was confirmed by intravenous pyelography, which showed the right kidney to be excreting normally. The ascending pyelogram was also confirmatory. Radiographs of the thorax at this time showed an opacity in the right lower zone suggestive of a secondary deposit.

Eighteen days after his first attendance a left nephrectomy was carried out (M.F.N.) with uneventful recovery. The nephrectomy specimen, which included the suprarenal, showed the lower pole of the kidney replaced by a growth 13 x 11 x 8 1/2 centimeters which had grown into the lumen of the renal vein. There was also an entirely discrete nodule of growth in the upper part of the kidney. Microscopy showed the growth to be a clear-cell carcinoma mostly of tubular structure, but papillary in some areas; the discrete nodule showed similar microscopic appearance. Microscopy also revealed a second discrete deposit in the suprarenal gland of similar cell type.

A few weeks after nephrectomy, consideration was given to removing the secondary deposit in the right lung. This was postponed, as there was doubt whether there were not multiple shadows in the lung, and as two presumably blood-borne secondaries had been demonstrated in the removed kidney and suprarenal.

Two and a half months after the nephrectomy there was no clinical evidence of further secondary deposits and there was only one really definite shadow in the lung fields. An exploratory right thoracotomy was therefore done (A.H.M.S.). Apart from a mass about 4 centimeters in diameter in the lower lobe, at least a dozen smaller nodules were felt scattered throughout the lung. No material was taken and thus no microscopical proof of the nature of the deposits was obtained. Recovery from this

exploratory operation was uneventful. A chest radiograph taken two weeks after this operation was the last to show the large shadow in the lower lobe. Three months later a postero-anterior film of the chest failed to reveal a definite lung shadow, and in many subsequent postero-anterior and lateral films no trace of the shadow was present. Eighteen months after the last film showing the shadow, tomographic cuts showing the whole thickness of the chest showed no trace of any deposits in the lung fields.

The patient remained in reasonable health and without clinical or radiological evidence of metastasis for eighteen months after nephrectomy, when he complained of pain in the right buttock, soon extending down the leg. As radiographs of the lumbar vertebrae and sacrum at this stage appeared normal, he was treated, on the assumption that he might have a disk lesion, with rest and later a corset. Two months later a radiograph of the sacrum revealed a secondary deposit which steadily extended in spite of radiotherapy. The patient was given a maximal skin dose of 2000 roentgens (factors: 250kV, 50 centimeters F.S.D., 1.9mm Cu H.V.L.). This treatment gave little relief of pain and he was kept in hospital, the growth in the sacrum being observed to extend gradually, involving eventually lumbar vertebrae and forming a pelvic mass. There was also evidence of nerve-root involvement. He required increasing sedation and steadily deteriorated to death two and a half years after the nephrectomy. At no time had he been treated with hormones or any other drug likely to affect the course of the malignant mass. During the last six months of his life his Hb level went from 14.9 (114%) to 14.5 (98%).

Autopsy showed extensive infiltration of the retroperitoneal tissues extending to and involving the seminal vesicles. The growth had a vascular polypoid appearance. The right kidney showed compensatory hypertrophy. The lumbar vertebrae and sacrum were extensively invaded by growth involving the cauda equina. Microscopy showed this to be the same clear-celled type of carcinoma. The lungs showed no evidence of secondary deposits or other abnormality except mild emphysema on extensive sectioning. The brain was not examined, but other organs showed no significant abnormality.

Disappearance of Metastases Following Nephrectomy for Carcinoma

BUEHLER HG; BETTAGLIO A; KAVAN LC

Oklahoma State Medical Association. Journal 53(10): Oct 1960; 674-677

Extracted Summary

Two cases of carcinoma of the kidney have been presented in which spontaneous disappearance of metastatic pulmonary lesions has occurred following nephrectomy. Such a phenomenon is quite rare. The number of cases reported are insufficient to alter the current use of nephrectomy in the presence of widespread metastases for other than palliative therapy.

SELECTED CASE REPORTS

A 59-year-old male was admitted to the Veterans Administration Hospital on October 26, 1958. The admitting diagnosis was reducible scrotal hernia. The genitourinary history was significant. In 1954 an intravenous pyelogram was done because of urinary frequency and dysuria. The patient was told the left kidney was "tilted." In 1956 and in 1958 he had bouts of gross, total, painless hematuria. The last episode was one month prior to admission. A five-pound weight loss had occurred over the past two or three years.

Physical examination revealed a well-developed, thin, white male. The positive physical findings were a large, firm, non-tender, fixed mass in the left upper quadrant of the abdomen which moved with respiration and a left scrotal hernia. The prostate was normal in size and consistency.

Admission hemogram showed 7,300 white blood cells, a hemoglobin of 12.3 grams and a hematocrit of 49%. The urine was free of protein and contained four to six white blood cells per high power field. Blood urea nitrogen was 10 mg%. Chest x-rays showed several discrete rounded densities bilaterally which were variable in size and consistent with lesions typical of metastatic carcinoma. The film of the abdomen revealed a large, oval, soft-tissue shadow occupying the left upper abdomen and displacing the bowel pattern medially. Intravenous pyelography showed prompt excretion and normal anatomy of the right kidney. The left kidney was non-functioning. A left retrograde pyelogram showed marked distortion of the upper calyces.

A left nephrectomy was done on November 19, 1958. A tumor mass measuring fifteen by thirty centimeters was removed. Extension of the tumor to the caval and aortic areas with involvement of the renal vein was noted. The postoperative course was uneventful except for a staphylococcal infection. The follow-up chest films at the time of discharge showed little, if any, change. The microscopic diagnosis was clear-cell carcinoma with extension into the renal vein.

On September 22, 1959, the patient was readmitted for evaluation. He had gained twenty pounds and was symptom-free. Except for the previously described hernia and a well-healed nephrectomy scar, the physical examina-

tion was negative. A chest film taken 10 months post-operatively showed almost complete disappearance of the pulmonary metastases. No bony metastases were detected on either the chest or abdominal films.

An inguinal herniorrhaphy was done. The postoperative course was complicated by a staphylococcal infection which cleared very slowly. At the present time which is over fourteen months since the nephrectomy, there is no clinical or x-ray evidence of malignancy. The patient is doing well. Although at no time was a biopsy of the pulmonary lesions obtained, the x-ray findings were typical of metastatic disease.

The second patient is a 59-year-old white female who was first seen in the Emergency Room of the University Hospital complaining of severe pain in the left lower quadrant of the abdomen accompanied by chills, nausea, and vomiting. The pain persisted for approximately thirty minutes and then subsided. About one week prior to this episode she had noticed her urine to be cloudy. She was referred to the University Outpatient Clinic for investigation. An intravenous pyelogram was done which revealed a large soft tissue mass in the left kidney associated with blunting of the calyces. The right kidney showed prompt function and normal architecture.

The past history revealed a "heart attack" about seven years previously. She had been hypertensive during the past three years. At the age of twenty-two a nineteen pound ovarian cyst had been removed and at the age of thirty-six a hysterectomy had been done for hemorrhage.

Physical examination presented an obese white female who appeared chronically ill. The blood pressure was 126/76. The temperature was 98.6°F. Tenderness was noted in the left upper quadrant of the abdomen and the left costovertebral angle. No masses were palpable. Further examination was not remarkable.

Laboratory data showed a hemoglobin of 8.3 gm% and a BUN of 13 mg%. The urine contained 15-20 WBC/HPF without protein or casts. Urine culture produced two varieties of coliform bacilli. The ECG was compatible with an old myocardial infarction. A left retrograde pyelogram showed a hydronephrotic left kidney. A pre-operative chest film was reported as normal.

After several whole blood transfusions, a left nephrectomy was done. Numerous perinephric adhesions were found. A tumor was present in the lower pole of the kidney with a concomitant hydronephrosis presumably secondary to compression of the ureteropelvic junction by the lower pole tumor. The postoperative course was uncomplicated. The pathologist's report was renal cell carcinoma, hydronephrosis and chronic pyelonephritis.

The pre-operative chest film when viewed in retrospect showed small, ill-defined shadows in both lung fields

which did correspond to the marked metastatic lesions seen on the chest film of May 1, 1958. A repeat chest x-ray on September 26, 1958, showed regression of the previously described pulmonary lesions. A chest film on January 1, 1960 is negative. The patient has gained weight and is doing very well with no clinical or x-ray evidence of metastases. It is now twenty-two months since nephrectomy. Although no pathological diagnosis was obtained to substantiate the diagnosis of pulmonary metastases, the chest films were typical of metastatic implants in the lungs.

Apparent Spontaneous Regression of Pulmonary Metastases Following Nephrectomy for Adenocarcinoma of the Kidney

SAMELLAS W; MARKS AR

Journal of Urology 85(4): April 1961; 494-496

Extracted Summary

A case of adenocarcinoma of the kidney with regression of pulmonary metastases following nephrectomy is presented. The pertinent literature is reviewed.

SELECTED CASE REPORT

A 43-year-old man (M. A., No. A-5760) was admitted 12 months prior to the present admission to the Brooklyn VA Hospital with a history of muscular aches over a year's period and the passage of dark red colored urine of one day's duration. Urine was brown with strong guaiac reaction, but no red cells seen on microscopic examination. Ten months prior to present admission, he had a similar episode of dark colored urine of two days' duration. An intravenous excretory urogram was interpreted as normal. Chest x-ray was unremarkable. The diagnosis of progressive muscular dystrophy had been made by the medical service on the basis of what was thought to be a paroxysmal myoglobinuria. On present admission he had an episode of gross hematuria associated with progressive weight loss. Physical examination at this time disclosed a firm palpable mass in the left upper quadrant. Urinalysis showed many red blood cells. Blood urea nitrogen was 12.5 mg%, hemoglobin 14.8 grams. The excretory urogram revealed a mass occupying the lower pole of the left kidney with normal right pyelogram. The mass in the left kidney was confirmed by retrograde urography. Chest x-ray showed multiple rounded infiltrates interpreted as being metastatic nodules throughout both lung fields.

In December 1958, left nephrectomy was performed. Pathology report: Specimen consisted of the left kidney which was markedly enlarged and of irregular shape due to the extensive growth of tumor and weighed 500 grams. The kidney was contained within the perinephric capsule which was removed with some difficulty. In the hilum, the renal vein was noted to be filled and distended with grey-yellow tumor tissue. The ureter was unremarkable. On section, the bulk of the kidney was replaced by mottled grey-yellow, moderately firm tumor mass which spared only the upper pole. Microscopic examination revealed clear-cell carcinoma of the kidney with invasion of the renal vein.

The postoperative course was uneventful. The radiologist held that in the presence of pulmonary metastases, x-ray treatment would be impractical. The patient was discharged and went back to his work, doing well.

Two years later he was readmitted to the hospital in mild heart failure. The previously noted pulmonary metastases were no longer visible on the chest roentgenogram. Subsequent tomograms of the chest also failed to visualize the previous pulmonary metastases except for one at the apex of the right lung. The patient recovered from this episode and returned again to work.

Hypernephroma: Disappearance of Metastasis After Nephrectomy

PRENTISS RJ; HOLLANDER FG; MULLENIX RB; FEENEY MJ; HOWE GE

Western Journal of Medicine 97(4): Oct 1962; 235-236

Extracted Summary

Host resistance affects the development of malignant tumors, as do the biologic potential of the tumor and genetic factors. However, the exact reasons for disappearance of metastatic lesions after removal of the primary tumor are not clear.

In the present case, as in many another reported in the literature, metastatic pulmonary lesions from a hypernephroma disappeared after the primary tumor was excised.

SELECTED CASE REPORT

The patient, a 63-year-old woman, entered the hospital in 1947 with complaint of gross hematuria associated with right renal colic. Secondary complaints were weakness and a heavy mobile mass in the right side of the abdomen. Upon physical examination, pallor, moist rales in both lungs and the presence of a round, smooth, movable mass 15 centimeters in diameter in the right flank were noted.

Results of laboratory studies showed hematuria, pyuria and moderate secondary anemia. The blood urea nitrogen was normal. In excretory urograms the left kidney and the bladder appeared normal. On the right, pelvic and calyceal deformity typical of renal neoplasm were visualized. Multiple large bilateral pulmonary metastatic lesions were seen in a film of the chest.

The diagnosis was: Hypernephroma, right, with pulmonary metastasis. Informed that the situation was incurable, the patient insisted on surgical removal of the kidney

to relieve pain and bleeding. But also she said, "Doctor, if you remove the mother, the daughters will disappear."

Therefore, at the insistence of the patient and the family, and for the relief of local discomfort, right nephrectomy was performed and at operation the pedicle and the renal vein were observed to be involved in the tumor.

The specimen was typical hypernephroma weighing 540 grams. The pathologist found the renal vein blocked by tumor. Upon microscopic examination it was observed to be clear-cell hypernephroma, grade IV.

The patient's health has been excellent in the 15 years since the operation. Films of the chest were taken occasionally during that time. Multiple areas of metastasis were still present three months after nephrectomy but ten months later the chest was completely free of metastatic lesions, as it was when the most recent film was taken, early in 1962. Upon examination of the patient, of a specimen of urine and of the remaining kidney, no evidence of disease was found. She was in good health and felt well.

Spontaneous Regression of Pulmonary Metastases From Hypernephroma

MILLER HC; WOODRUFF MW; GAMBACORTA JP

Annals of Surgery 156(5): Nov 1962; 852-856

Extracted Summary

The thirteenth case of spontaneous regression of pulmonary metastases from a hypernephroma after simple nephrectomy is reported. The propensity for this to occur in men is observed, as is the appearance of other metastases while the lung lesions disappear. Some concepts are considered in relation to theories of action.

SELECTED CASE REPORT

A 57-year-old white man was seen on April 9, 1959 for evaluation of bilateral pulmonary lesions noted on chest x-ray films. Symptoms of cough, sore throat, fever and general malaise, suggestive of a severe respiratory infection, had appeared seven weeks prior to this visit. Antibiotics produced only slight improvement. Two weeks prior to the clinic visit, he noted the onset of right chest

pain located in the region of the seventh and eighth ribs. The pain was accentuated by motion but was not pleuritic in character. A chest x-ray film showed multiple pulmonary lesions compatible with the diagnosis of metastatic carcinoma in both lungs. These lesions measured up to 6.0 centimeters in diameter in the left lung, with at least six discrete nodules noted in the right lung.

The thoracic surgical consultant agreed that the lesions were metastatic, and suggested intravenous pyelography and gastrointestinal series in an attempt to localize the primary lesion. Urinalysis was negative. Hemogram and blood chemistry tests were normal. Gastrointestinal x-ray studies were unremarkable. Pyelography suggested a mass in the upper pole of the right kidney, with compression and downward deviation of the upper collecting structures. Translumbar aortogram demonstrated a tumor mass in the upper pole of the right kidney with puddling of contrast medium.

On May 19, 1959, a transperitoneal right nephrectomy was performed. The pathologist's report described a necrotic tumor of the upper pole 6.0 centimeters in diameter with hemorrhagic foci and no vascular invasion.

The interstitial tissue was fibrotic and infiltrated with aggregates of lymphocytes. Histologic diagnosis was hypernephroma. The patient did well and was discharged on June 5, 1959, to be followed by serial chest x-ray examinations.

The change in the chest x-ray films was profound. Three months following operation there was almost complete disappearance of the previously described lesions in the lower lung fields. Six months after operation there was no evidence of any metastatic lesions on chest x-ray films. This remission has persisted to the present time. The most recent film, taken on July 31, 1961, was read as normal. The patient has had no evidence of other metastatic lesions in the 27 months following nephrectomy.

Spontaneous Disappearance of Pulmonary Metastases in Carcinoma of the Kidney

ANDREWS JT

Medical Journal of Australia 52: Aug 7 1965; 241-242

Extracted Summary

The progress of pulmonary metastases from a clear-cell carcinoma of the kidney, the so-called hypernephroma, can be quite unpredictable. The case is reported of a middle-aged woman who developed carcinoma of the kidney complicated by pulmonary metastases. After nephrectomy, the metastases disappeared spontaneously. The patient remains well and the chest radiograph clear three years later.

SELECTED CASE REPORT

The patient, a married woman, aged 49 years, developed her first symptoms in July 1960. At that time she noticed haematuria (which lasted for three days), in which urine and blood were well mixed. A similar episode of haematuria, also lasting three days, occurred in December 1960. After this the patient developed intermittent backache, but despite these symptoms medical advice was not sought until April 1961, when she felt a mass in the right side of her abdomen. At about the same time, an attack of chest pain occurred, associated with a small hemoptysis. Intravenous pyelography showed the presence of a large right-sided renal mass. A chest radiograph taken at the same time revealed multiple pulmonary opacities, which were regarded as metastatic by the radiologist reporting on the film. This opinion was confirmed by two other radiologists separately, on later occasions.

In spite of this report, a right nephrectomy was performed, and a massive renal tumour was removed. Two pathologists who examined the specimen separately reported clear-cell carcinoma of the kidney invading the parenchyma. After operation in May 1961, the patient was referred to the Peter MacCallum Clinic for consideration of treatment to the pulmonary metastases. Although a further radiograph of the chest taken at this time confirmed the presence of multiple metastases, the patient

was symptom-free, and treatment was therefore deferred. There was no evidence of metastases elsewhere. Two months later, in July 1961, a radiograph of the chest was reported as being completely clear.

The only alternative diagnoses, which were considered and then discounted on the clinical picture and the investigations, were atypical pulmonary sarcoidosis and multiple lung infarcts. The results of investigations were as follows: haemoglobin value, 12.8 gm/100 ml; white cell count, 8,000/mm³; estimated sedimentation rate, 12 mm/hour; serum calcium level, 10.4 mg/100 ml; serum phosphorus level, 4.0 mg/100 ml; serum total protein level, 7.3 gm/100 ml; serum albumin level, 4.5 gm/100 ml; serum globulin level, 2.8 gm/100 ml; electrophoresis, normal pattern; sputum examination for tumour cells, negative findings on three occasions; radiograph of the cervical part of the spine, normal; barium meal x-ray examination, small para-oesophageal hiatus hernia of the rolling type.

The patient was subsequently reviewed with a chest radiograph every six months. She has remained well, and there have been no symptoms other than those relative to her hiatus hernia. The chest radiographs have remained clear for three years. The last review was in November 1964.

Spontaneous Disappearance of Pulmonary Metastases in Hypernephroma

Final Report of Twenty-Year Follow-Up After Nephrectomy

SCHAPIRA HE; OPPENHEIMER GD

Mount Sinai Journal of Medicine 34(1): Jan-Feb 1967; 11-16

Extracted Summary

A patient with renal cell carcinoma and lung metastases discovered preoperatively underwent nephrectomy. The lung metastases disappeared spontaneously 22 months postoperatively and the patient remained free of symptoms to his death which occurred 20 years later at the age of eighty-two. The patient died following a cerebrovascular accident.

The literature on the spontaneous disappearance of pulmonary metastases in hypernephroma has been reviewed, and the many possible theories on this interesting subject have been discussed.

SELECTED CASE REPORT

This case was first presented in the *Journal of Urology* in 1948 by Mann. The report aroused considerable interest and has been referred to many times in the literature. The unusual biological phenomenon and its great clinical importance prompted us to publish the present study.

At the time of the original report, the patient was four years postnephrectomy for hypernephroma. A preoperative chest x-ray had shown bilateral "cannon-ball" metastases. No lung biopsy was obtained; no radiotherapy was given either pre- or postoperatively. After leaving the hospital, the patient appeared to deteriorate and in summer 1945 frank hemoptysis occurred. Thereafter, his general condition improved with gain in weight and strength. Chest x-ray 22 months postoperatively disclosed complete disappearance of the pulmonary nodular shadows. The only abnormality noted was some linear fibrosis in the right lung.

The patient was seen at regular intervals and remained asymptomatic except for a left inguinal hernia with several episodes of incarceration for which surgery was not performed. Repeated chest x-rays and bone surveys were consistently normal. In 1955 physical examination for an upper respiratory infection revealed no metastases and chest x-rays were again negative. The patient continued to lead a normal life until March 1963 when he died following a cerebrovascular accident. No autopsy was obtained.

At the time of death the patient was 82 years of age and had lived exactly twenty years after the renal extirpation. Although there was no histological diagnosis of the lung lesion, there is no doubt that the lung deposits were metastatic, as interpreted by all established and accepted radiological criteria and as read by various reputable radiologists.

A Case of Spontaneous Regression of Pulmonary Metastases Arising from Hypernephroma Following Nephrectomy

MATHIAS DB

British Journal of Urology 43: 1971; 65-68

Extracted Summary

Spontaneous regression of pulmonary metastases in cases of hypernephroma is now well documented. Some 20 individual cases have been reported in the literature, to which we would add one further.

In a review of the world literature and personal communications in 1964, Everson reported 18 cases of spontaneous regression of pulmonary metastases in hypernephroma. In both this and the present series there would seem to be 3 groups. The numbers are by no means large enough to stand up to statistical analysis, but are of some interest: Group 1, Regression of lung metastases with no treatment, 15%; Group 2, Appearance of pulmonary metastases following nephrectomy and their subsequent disappearance, 10%; Group 3, Regression following nephrectomy, 70%. To

these may be added a further group, accounting for some 5%, in which the pulmonary lesions were apparently exacerbated by nephrectomy before eventual regression. The interval between nephrectomy and regression is extremely variable, ranging from one month to 4 years in the present series, the average period being some 11 months. It can only be said that our present knowledge is inadequate to account for the reported phenomenon but that it represents a rather rare but gratifying adjunct to nephrectomy.

A case is reported in which the spontaneous regression of pulmonary metastases of hypernephroma occurred after nephrectomy.

SELECTED CASE REPORT

A 59-year-old woman presented in May 1968 with painless haematuria. Her urine had been frankly blood-stained on 3 occasions in the previous month. Examination revealed a large mass in the left side of the abdomen, which was non-tender and moved with respiration.

Investigations revealed a normal blood picture with a haemoglobin of 83%, normal electrolytes and albuminuria ++ with occasional microscopic red cells in the urine. Routine pre-operative chest X-ray was reported as being consistent with widespread secondary deposits; IVP showed the left kidney to be enlarged with ill-defined renal elements. There was a mass occupying the lower pole. The right kidney and ureter were normal.

In June 1968, the mass was removed through a left paramedian incision, together with the spleen, to which it

was adherent. Macroscopically, the specimen was seen to be a typical hypernephroma, the cut surface of which showed the greater part of the kidney to be replaced by growth. Microscopically the diagnosis of primary carcinoma of the kidney was confirmed; the tumour did not invade the renal vein. Postoperative recovery was uneventful, the fourth day being marked by the passage of a ureteric cast which showed no malignant cells when subjected to microscopy.

In August 1968, the chest x-ray showed slight improvement and in November 1968 was reported as normal. The patient had received no radiotherapy or anti-mitotic drugs, and the chest X-ray had remained clear to date (1st June 1970). When last seen the patient was well, having returned to her normal duties and having put on 1 1/2 stone in weight.

Regression of Metastatic Renal Cell Carcinoma Following Nephrectomy

GARFIELD DH; KENNEDY BJ

Cancer 30(1): July 1972; 190-196

Extracted Summary

Regression of pulmonary metastases following nephrectomy for renal cell carcinoma has occurred in two patients. In one patient, a hepatopathy also disappeared, and the patient remained free from disease for 16 years. In the other patient, following nephrectomy there was disappearance of hypercalcemia, presumably due to removal of a source of production of a parahormone-like polypeptide. It appears that older males with only pulmonary metastases make up the majority of patients in whom regression of metastases after nephrectomy has been observed. Hormonal and immunologic factors are implicated in this phenomenon. There is a sound rationale for nephrectomy in the presence of metastatic renal cell carcinoma.

SELECTED CASE REPORT

Case 1: A 61-year-old Caucasian man (UH# 1131380-8) was admitted to the University of Minnesota Hospitals on December 2, 1970, with a 7-month history of vague abdominal discomfort, anorexia, constipation, and a 40-pound weight loss. Other than the evidence of weight loss, the physical examination was normal. The lungs were clear, and no abdominal masses were palpable.

The hemoglobin was 12 gm/100 ml, and the white blood cell count was 6,900/mm³ with a normal differential. The platelets were 546,000/mm³, and the sedimenta-

tion rate was 82 mm/hour. The urinalysis revealed a specific gravity of 1.015, pH 6; no protein was detected, and the sediment had no cells. BUN was normal. The serum calcium was 11.8 mg/100 ml, and the serum phosphorus was 3.0 mg/100 ml. Liver function studies were normal. The serum albumin was 2.5 mg/100 ml, alpha₁ globulin 0.6 gm/100 ml, alpha₂ globulin 1.0 gm/100 ml, and gamma globulin 1.3 gm/100 ml.

The chest x-ray showed multiple bilateral pulmonary nodules. The esophagus, stomach, small and large bowels,

and bones were normal on x-ray. On the intravenous pyelogram and nephrotomogram, the upper lateral border of the right kidney appeared enlarged. A selective right renal arteriogram showed a 10 centimeter mass with prominent neovascularity.

A surgical exploration with a palliative right nephrectomy was performed on December 16, 1970. A renal tumor which was superficially invading the right lobe of the liver was dissected from the liver and diaphragm. The kidney and tumor appeared to be completely removed. Microscopically, the tumor was pleomorphic, and the nuclei were irregular with prominent nucleoli. Some cells contained foamy or clear cytoplasm. There were large areas of necrosis. The postoperative period was uncomplicated except for a purulent wound infection which healed

in 4 weeks. No systemic or topical antibiotics were used. The serum calcium, 4 days after surgery, was 9.1 gm/100 ml.

At a clinic visit 6 weeks after surgery, the patient was asymptomatic and gaining weight. The chest x-ray showed an increase in size and number of all pulmonary metastases. No treatment was instituted. Serum calcium was 9.9 mg/100 ml.

Eleven weeks after surgery, he was still feeling well. The chest x-ray showed a decrease in the size of all the pulmonary nodules. By the 18th week, the chest x-ray showed disappearance of all pulmonary lesions. The patient has returned full time to his occupation as a grave digger.

Vagaries of Renal Cell Carcinoma

WAGLE DG

Journal of Medicine (Clinical, Experimental and Theoretical) 3(3): 1972; 178-189

Extracted Summary

The higher incidence of renal cell carcinoma in males than in females is significant in the light of the possible hormonal and chemical dependency of the malignancy. The occasional incidence of spontaneous regression suggests that renal cell carcinoma may lack autonomy. Unusual latency in growth and delayed metastasis may indicate the presence of autoimmune mechanism within the host. Prolonged survival with primary or metastatic tumor further suggests some degree of host resistance. The peculiar biologic behavior of renal cell carcinoma is largely responsible for the difficulty in evaluating the response to various therapeutic modalities, especially chemotherapy.

The purpose of this article is to present some of the noteworthy peculiarities of renal cell carcinoma. These data were obtained from a review of 270 cases of renal cell carcinoma treated at Roswell Park Memorial Institute, Buffalo, N. Y., from 1948-1968. These cases can be classified in the following categories: Hormonal influence, autoimmune mechanisms, pathogenesis, and therapeutic responses. Twelve case summaries are presented as examples of the possible influences of the above factors.

One remarkable property of renal cell carcinoma is the occasional spontaneous regression of untreated primary disease and the disappearance of pulmonary metastasis following nephrectomy. The author speculates on the possible causes of this phenomenon.

SELECTED CASE REPORT

Case 6: A 57-year-old white male was seen on April 9, 1959, for evaluation of bilateral pulmonary lesions noted on chest x-ray. Symptoms of cough, sore throat, fever and general malaise, suggestive of a severe respiratory infection, had appeared 7 weeks prior to his visit. Urinalysis was negative. Hemogram and blood chemistries were normal. Gastrointestinal x-rays were unremarkable. Pyelography suggested a mass in the upper pole of the right kidney, with compression and downward deviation of the upper collecting structures. A translumbar aortogram demonstrated a tumor mass in the upper pole of the right kidney with puddling of contrast medium.

On May 19, 1959, a transperitoneal right nephrectomy was performed. The pathology report described a necrotic renal cell carcinoma, 6 centimeters in diameter with hem-

orrhagic foci and no vascular invasion. The patient did well and was discharged on June 5, 1959, to be followed by a serial chest x-ray.

Three months following surgery, there was almost complete disappearance of the previously described lesions in the lower lung fields. Six months after surgery, there was no definite evidence of any metastatic lesions on chest x-ray. This remission has persisted to the present time. The patient has had no evidence of other metastatic lesions. In 1963, he underwent resection of an abdominal aortic aneurysm. In 1966, a transurethral prostatic resection for benign prostatic hypertrophy was performed. Periodic follow-up has failed to show any recurrence until the present date.

Regression of Metastases after Nephrectomy for Renal Cell Carcinoma

SILBER SJ; CHANG C-Y; GOULD F
British Journal of Urology 47: 1975; 259-261

Extracted Summary

A case of an extensive renal cell carcinoma with temporary regression of pulmonary metastases is reported. The literature of similar reported cases is briefly reviewed.

SELECTED CASE REPORT

A 53-year-old man, E. C. (385-03-63-16), was admitted with a 1-year history of 30-pound weight loss, anorexia, and generalized weakness. He had one attack of gross, painless haematuria 3 months before admission. Physical examination revealed a large right flank mass. There were no palpable lymph nodes and no other masses. The hematocrit was 42%, the white blood count 11,400; urinalysis showed no protein, sugar, WBCs or bacteria, but 7-8 RBCs per HPF. Chest x-ray revealed 5 metastases.

Total serum protein was 6.3 gm% and albumin 2.1 gm%. Alkaline phosphatase was 183 and 265 m units/ml (upper limit of normal 85 m units/ml). The other liver functions were normal and there was no hypercalcaemia. Intravenous urography revealed a large right renal mass and angiography demonstrated a large renal cell carcinoma replacing most of the right kidney. On abdominal exploration the tumour was found to be extensively invading perirenal tissue and many enlarged lymph nodes along the aorta and the common bile duct were biopsied.

These nodes were not dissected but the kidney and Gerota's fascia were removed intact. Histologic examination of the tumour showed a poorly differentiated and spindle cell carcinoma interspersed with a few areas of the more classical clear-cell variety. The lymph nodes also showed metastatic renal cell carcinoma. The patient's postoperative recovery was unremarkable.

Chest x-ray 1 week after nephrectomy revealed no change. One month later only 2 of the metastases were still recognisable. We had entertained the idea of starting him on Provera 1 month postoperatively but because of this spontaneous regression, he was not treated. Two months postoperatively only 1 metastasis was identifiable. This one was superimposed on the right hilum and did not change in size throughout this period, nor in the following 5 months. In addition, the liver functions had all returned to normal and the patient was feeling strong and robust. By 1 year, however, the patient developed new pulmonary and bone metastases.

Idiopathic Regression of Metastases from Renal Cell Carcinoma

FREED SZ; HALPERIN JP; GORDON M
Journal of Urology 118: Oct 1977; 538-542

Extracted Summary

Herein we review 48 acceptable cases of idiopathic regression of metastases from renal cell carcinoma culled from the literature and present 3 additional cases. The data are analyzed and the issue of organ specificity in coping with metastases is discussed.

SELECTED CASE REPORT

Case 1. M. S., a 49-year-old white woman, was seen first in 1952. At this time a left nephrectomy was done for a clear-cell adenocarcinoma of the kidney. In 1957 a chest x-ray disclosed a right lower lobe mass but therapy was deferred. In 1962, because of paralysis on the right side, brain surgery was performed and a metastatic tumor was removed from the motor area. In 1963 the lower lobe of the right lung also was removed for metastatic renal carcinoma. Later the same year another metastatic brain tumor was removed. In 1964 and 1965,

3 separate metastases were excised from the left foot, necessitating amputation of the left small toe. A chest x-ray in 1966 revealed a nodule in the left lower lobe and later films showed apparent metastases in the left fourth interspace. In 1967 masses appeared in the left lower buttock area and 3 distinct metastases were removed. Chest x-rays at that time and in 1968 showed large nodules present in both lungs and a nodular density at the right hilum. The patient was not seen again until November 23, 1970, when she seemed to be a rejuven-

ated individual. The cough was no longer present, and strength, appetite and weight returned. A chest x-ray now revealed total disappearance of the lung metastases noted previously.

Follow-up x-rays in 1971 and 1972 also were clear. The patient's final admission to our hospital was on February 19, 1973 with neck rigidity and she died of pneumococcal meningitis. An autopsy 21 years after the original neph-

rectomy showed only a small focus of clear-cell adenocarcinoma in the left lower lung. There were no other metastases.

All metastases were identified clearly as being consistent with their origin as renal cell adenocarcinoma. The patient had never received x-ray therapy nor chemotherapy.

Spontaneous Regression of Pulmonary Metastasis After Nephrectomy Because of Renal Adenocarcinoma

BUSATO F; PAVLICA P; RAMINI R; VIGLIETTA G

Rivista de Patologia e Clinica della Tuberculosis e di Pneumologia 52(5): 1981; 449-463

Extracted Summary

The spontaneous regression of metastasis due to [human] renal adenocarcinoma is very uncommon; there are just 58 observations of it in the literature. The authors present a detailed analysis of these 58 cases as well as an additional case report from their practice. Up to now this event has not been explained, and it seems that many factors may cause it. Alterations of the immunologic status, hormonal modifications and a particular reactivity of the pulmonary tissue of the patient are discussed as possible factors.

SELECTED CASE REPORT

A 45-year-old male, F. N., reported asthenia from February 1972 and in April he noticed the appearance of a slight fever (37.8°C.) every afternoon. This was associated with much sweating at night and a weight loss of 7 kilograms in 2 months. He underwent some laboratory tests including erythrocyte sedimentation rate for which there was a high reading (IK=61). Radiologic examination of the chest only showed results demonstrating left pleurisy. This patient was hospitalized in June 1972.

The laboratory exams made when the patient was admitted demonstrate only a slight anemia and confirm a high erythrocyte sedimentation rate (IK=54). The radiologic exam of the chest, including tomography of the right base, showed the presence of one round, opaque, homogeneous lesion with well-defined edges and with a maximum diameter of 1.5 centimeters that was projected at the same level as the right cardiophrenic angle. A lesion of metastatic nature was suspected and a perfunctory urography with tomography is performed. This demonstrated an expansive formation of the inferior pole of the kidney.

To the left the renal pelvis appeared inferiorly displaced on account of a round formation level with the superior pole and with a diameter of 12 centimeters whose edges were somewhat bumpy. This did not demonstrate an obvious deficit of the nephrographic effect. Also, the

left renal calices and ampulla appeared to be arched on account of the existence of another inferior polar expansive formation. Abdominal aortography demonstrated that the expansive formations just described are richly vascularized with newly formed vessels of the neoplastic kind.

On 2/12/1972, left nephrectomy was performed with inferior right polar heminephrectomy. Histological examination demonstrates this to be renal adenocarcinoma with bilateral metastases.

Follow-up tomography performed 15 days after the intervention demonstrated that the dimension of the opaque formation of the right pulmonary base had not changed. Radiologic and tomographic examination of the chest about 2 months after the operation demonstrated disappearance of the opaque formation from the right lung. Further radiologic exams of the chest performed after 6 months confirmed the absence of parenchymal lesions.

Three years after the intervention, the patient suffered from dizziness and headaches. After undergoing neuro-radiologic exams, several cerebral metastases were found leading to the death of the patient in a short time while the radiologic exam of the chest confirmed the absence of pulmonary metastatic lesions.

(Noetic Sciences translation)

Clearing of Pulmonary Metastases After Nephrectomy for Hypernephroma

GELFAND ML; BEGNER JA

New York Academy of Medicine. Bulletin 57(5): June 1981; 378-381

Extracted Summary

The case of a 53-year-old man is reported. He complained of a severe cough which had lasted several weeks and was examined by Dr. M. L. Gelfand. A rounded mass in the upper left quadrant of the abdomen was found. Fluoroscopic and x-ray examination of the lungs showed bilateral densities. The patient underwent left nephrectomy for a large clear-cell carcinoma of the kidney. The lung metastases cleared over a period of two years after nephrectomy. His past medical history revealed that several months before examination he had undergone a prostatectomy. An intravenous pyelogram done at that time revealed no lung abnormalities. (Permission to reproduce case report denied by authors.)

Spontaneous Regression of Metastatic Renal Cell Carcinoma

SNOW RM; SCHELLHAMMER PF

Urology 20(2): Aug 1982; 177-181

Extracted Summary

A case is reported of spontaneous regression of histologically documented metastatic renal carcinoma after nephrectomy, with excellent follow-up over six years. Review of all the available data suggests that the incidence of such regression is less than 1%. Approximately 60 cases of spontaneous regression of metastatic renal carcinoma have been reported.

SELECTED CASE REPORT

A previously well sixty-four-year-old white man presented in July 1975, with weight loss, upper abdominal discomfort, and nausea. He had no hematuria, genitourinary symptoms, cough or dyspnea. His abdominal discomfort was in the right upper quadrant. Findings on physical examination initially were non-contributory. The chest was clear to auscultation. No lymphadenopathy was present. The liver was neither tender nor enlarged. There was slight discomfort in the right flank, but no masses were palpable. Findings on examination of the external genitalia and rectum were normal. The prostate was small and benign to palpation.

Urinalysis showed no red or white cells or crystals. Oral cholecystogram was normal. Upper gastrointestinal and barium series showed normal findings. On chest x-ray film a nodule was demonstrated in the left hilar area. This was confirmed with pulmonary tomograms, which revealed a mass 1.5 by 2 centimeters in the left hilar region. Comparison of these films with a routine chest roentgenogram performed one year previously showed that the nodule had not been present previously. A liver scan was normal, but liver enzymes showed slight elevation of SGOT 77 (normal 50), alkaline phosphatase 99 (normal 85), LDH 330 (normal 200). Bilirubin was normal.

Of concern at this stage was the nature of the solitary pulmonary nodule. The patient underwent a formal thoracotomy with resection of the left fifth rib. Examination of the left lung, in fact, revealed more than 6 nodules (each 1 to 2 centimeters in diameter). Three of these nodules were removed for histologic section. Other nodules were located medially close to great vessels. Since a diagnosis of metastatic carcinoma was made, no attempt was made to remove these nodules. Histologic examination of the lung nodules removed showed large clear cells typical of renal cell tumor.

Consultation with urologists was sought. Findings on intravenous pyelography suggested a mass in the lower medial half of the right kidney; this was confirmed with tomograms. Renal angiography revealed neovascularity and microaneurysms in the mid and lower part of the kidney. In the lower medial part of the kidney there appeared to be a 5 centimeter cyst. Inferior cavography demonstrated a patent inferior vena cava and right renal vein with no evidence of tumor thrombus.

The diagnosis was primary carcinoma of the right kidney with multiple pulmonary metastases. Because of increasing discomfort in the patient's right flank, a trans-abdominal right radical nephrectomy was done. Macroscopic appearance of the tumor revealed typical renal

adenocarcinoma. Adjacent to the mass was what appeared to be an area of hemorrhage. There was compression of the renal vein but no infiltration of tumor into it. Histology revealed a renal cell carcinoma comprised of both clear cells with a tubular pattern and spindle cells. Both cell types exhibited characteristics of malignancy. The area of hemorrhage was confirmed histologically to be hemorrhage into necrotic tumor. It was thought that the patient's initial complaint of upper abdominal pain and discomfort was probably related to hemorrhage into this area of necrotic tumor.

Six weeks later pulmonary tomograms were repeated; no nodules were seen. In particular, the nodule that had been seen preoperatively in the left hilar region which had not been surgically removed was no longer present.

The patient gained weight and appeared to thrive after surgery. The hepatic enzymes that had been slightly abnormal reverted to normal postoperatively and remained so. He was not given medroxyprogesterone (Provera) or any medication nor did he have radiotherapy to any area. Chest x-ray films done at regular intervals have not demonstrated recurrence of tumor.

In 1978 the patient suffered prolapse of L5-S1 intervertebral disk requiring a laminectomy. Disk material was

removed and histologic examination was negative for malignancy. Early in 1979 the patient underwent a transurethral resection for what was believed to be benign prostatic hypertrophy causing prostatism. In fact, histology revealed well-differentiated adenocarcinoma in many prostatic chips. Staging procedures in the form of bone scan, bone marrow aspiration, and enzymatic and radio-immune acid phosphatase were performed and were all within normal limits. An intravenous pyelogram at this time revealed a normal left kidney. Thus, the patient was staged as having an A2 carcinoma of the prostate. He underwent an ^{125}I implantation of the prostate with simultaneous bilateral pelvic node dissection. All nodes were negative for tumor.

Strict follow-up since that time up to the present reveals a man in good health who still has no evidence of metastatic disease six and one-half years after nephrectomy.

Since the submission of this article, a routine chest film done six and one half years after right nephrectomy revealed a right pulmonary lesion. Bone scan was normal. CT scan of the abdomen showed no abnormality. A right thoracotomy was performed, and total excision of the mass was successfully accomplished.

Spontaneous Regression of Pulmonary Metastases After Nephrectomy for Renal Cell Carcinoma

NAKANO E; SONODA T; FUJIOKA H; OKUYAMA A; MATSUDA M; OSAFUNE M; TAKAHA M
European Urology 10(3): 1984; 212-213

Extracted Summary

A case of spontaneous regression of pulmonary metastases from renal cell carcinoma after nephrectomy is presented. In a 57-year-old Japanese male who had had pulmonary metastases at the time of nephrectomy, the metastatic lesions disappeared without adjuvant therapy 8 years after nephrectomy. The patient is still surviving without recurrence or any signs indicative of new metastasis at the present. The clinical aspects of this interesting phenomenon are discussed briefly.

SELECTED CASE REPORT

A 57-year-old Japanese male (K. M.) was admitted to our department with complaints of gross hematuria and right flank pain on May 17, 1972. An intravenous pyelogram showed a space-occupying lesion in the right kidney, and a selective right renal arteriogram revealed a hypervascular malignant tumor involving the lower pole of the kidney. From these findings, we diagnosed this case as having renal cell carcinoma. Preoperative routine laboratory examinations were normal but the chest x-ray film showed multiple soft nodules which were presumed to be pulmonary metastases.

On May 26, 1972, he underwent a right nephrectomy.

Pathohistological examination showed a differentiated clear-cell carcinoma. The postoperative course was uneventful, but there were no changes in pulmonary lesions during 2 weeks after the operation. He was discharged 15 days postoperatively without any adjuvant therapy. In October 1980 (8 years after the operation), he visited our department again. Neither local recurrence nor spread distant metastases was found, but pulmonary metastases previously noted had disappeared on the chest x-ray film. Thus, spontaneous regression had occurred. At present, he is well.

Spontaneous Regression of Lung Metastases from Renal-Cell Cancer: Myth or Reality?

A Report of Two Cases

BARRÉ C; VÉRINE JL; RÉGNIER J; ÉNON B; HOUSSIN A; CHAIGNÉ P; SORET JY

Annales D'Urologie 20(4): 1986; 275-279

Extracted Summary

The authors report two cases of regression of lung metastases from renal cell cancer with cytological and histological proof. They present a complete review of the literature and analyse the theories proposed to explain this phenomenon.

SELECTED CASE REPORTS

Case 1: A 49-year-old man suffered from lumbar pains on the right side which were accompanied with macroscopic hematuria. At the medical examination palpable masses were found in the area of the right lumbar cavity. Intravenous urography, echography, tomodensitometry revealed the presence of a tumor of the right kidney which also invaded the veins of the lower cavity. Chest x-ray was normal. The patient was subjected to a radical nephrectomy with a partial cavectomy. The histological analysis confirmed the diagnosis of adenocarcinoma of the kidney. The postoperative period was characterized by a severe infection associated with pleuropulmonary staphylococci. Ten days' therapy with antibiotics resulted in the normalization of the lung parenchyma and the persistence of the right pleura congestion. Fifteen days later nodules resembling metastases appeared in two areas. Bronchoscopy and fibroscopy was performed. The obtained specimen was composed of carcinomatous cells whose morphology was not similar to the morphology of primary bronchiocarcinoma. Very unexpectedly the nodules disappeared 3 weeks later, and the patient's condition normalized. The patient survived for another 5 years; the

bronchoscopic and radiosopic tests were normal, and his general health was excellent.

Case 2: A 42-year-old man was hospitalized due to pain in the right part of the chest, and macroscopic hematuria. The chest x-ray revealed the presence of nodules in the right area, and intravenous urography showed the presence of tumor on the top surface of the right kidney. The diagnosis was established as a kidney tumor with pulmonary metastases. Despite the young age of the patient a palliative nephrectomy was performed. The histological analysis confirmed the diagnosis of adenocarcinoma of the kidney. After 6 months the number of pulmonary metastases increased dramatically, but the patient's general condition continued to be excellent. Six months later the chest x-ray was normal. The other tests: tomography, tomodensitometry, bronchoscopy, were all negative. After another 6 months a small nodule appeared in the left lung and continued to stay the same size for another 5 months. Thoracotomy and segmental lobectomy were performed showing metastasis of kidney adenocarcinoma. On clinical examination six months later the patient was found to be in excellent health.

(Noetic Sciences translation)

Spontaneous Regression of Pulmonary Images Considered as Renal-Carcinoma Metastases

A Report of Two Cases

MAGE P; BALLANGER P; LAKDJA F; GUIBERT JL; VINCENT J; CHOMY P; LAMARCHE P

Annales D'Urologie 20(4): 1986; 271-274

Extracted Summary

The authors report two cases of spontaneous regression of pulmonary metastases from hypernephroma; this is an exceptional event that occurs in 0.8% of metastasized renal carcinomas; spontaneous regression in all cancers as a group occurs in 0.0014% of cases. The theories postulated up till now to explain this phenomenon are unconvincing. The authors suggest the possibility of tumorous emboli: this event, that occurs mainly in those carcinomas with a propensity for extension to veins, such as renal carcinoma, choriocarcinoma, hepatoma and liver metastases, does not necessarily give rise to a metastasis. The evidence that leads to advocate nephrectomy in metastasized renal carcinoma is recalled and discussed.

SELECTED CASE REPORTS

Case 1: M.D. was hospitalized after the discovery on the chest radiogram of pictures resembling air balloons. For two months, this 55-year-old patient had suffered with asthenia, loss of weight, and abdominal pains. The nodules were discovered during a lung radioscopy examination, performed in the absence of any functional respiratory problems.

The pulmonary tomography confirmed the existence of five roundish areas of opacification in the field of the right lung. The fibroscopy was normal. Biopsy and cytological analysis performed after the brushing were negative.

Echography of thoracic and abdominal areas revealed the presence of the tumor with neoplastic growth in the vein cavity on the level of the lower pole of the right kidney. Intravenous urography confirmed the finding.

The sterno-abdominal scanography showed that the images were typical for metastatic dissemination. The pleural retraction and multiple small areas of emphysema were other side effects. Nevertheless the data of the thoracic scanography were not comparable to the results of tomography performed three weeks before. The repeated tomographic examination showed only 2 images on the right and on the left.

In the presence of the spontaneous regression of the number and size of the images over a six-week period, and the general good health, it was decided to perform nephrectomy, which was done on November 18, 1982.

The histological analysis showed the presence of clear-cell adenocarcinoma without ganglionic metastases and with neoplastic emboli in the vein cavity. The tomodensitometry of the thorax carried out six weeks after the operation again showed two small nodules in the right retro-

and para-sternal areas. The images at the right base of the thorax disappeared completely as well as the suspected areas on the left. On the other hand, some bilateral but predominantly on the right side, enhancement of the interstices, a state of fibrosis, and areas of emphysema were seen. The patient was regularly examined clinically and radiologically, and three years after regression the remission of the renal neoplasm was complete.

Case 2: Mme. D., 58 years old, was hospitalized with cancer of the kidney with pulmonary metastases. The attention to these conditions arose as a result of the patient's asthenia and tachycardia. The abdominal echography and intravenous urography revealed the extensive spread of tumor on the superior pole of the right kidney. The radiography of the lungs showed two metastases on the right and on the left. The vein cavity was free as shown by the cavography, the bone scintigraphy was normal.

Despite the conventional view on the diffusion of metastases, psychological condition of the patient, who was informed about her condition, and general well-preserved health condition, it was decided to perform the nephrectomy on April 19, 1984. The excision was total despite the parietal posterior extension. The histological diagnosis showed renal clear-cell adenocarcinoma. Ten months after the operation, the images in the right lung disappeared, but the metastases in the left lung remained without change. According to the last news, 16 months after the operation, the patient is doing very well: the metastases in the field of the left lung are still present without change, but no new metastases have appeared.

(Noetic Sciences translation)

OTHER METASTASES OF RENAL CARCINOMA

Spontaneous Regression of Cancer

LINCLAU LA; TONINO AJ

Archivum Chirurgicum Neerlandicum (Netherlands Journal of Surgery) 26(2): 1974; 170-180

Extracted Summary

A case history of a patient with two bone metastases, one in the femur and one in the pelvis, is presented. Regression of both metastases occurred after treatment of a spontaneous fracture of the femur with a Küntscher nail and a frozen cortical homograft. Three years later the primary tumour was discovered (a hypernephroma) and a nephrectomy was performed.

A literature survey is given of known cases of regression of metastases of a hypernephroma and of regression of bone metastases. The possibility of an aspecific stimulation of the patient's immune system by the homograft is studied and discussed.

SELECTED CASE REPORT

A 67-year-old female was admitted to the medical department of the University of Amsterdam in November 1959 because of feelings of pain, first in her right sacral region and later in her left thigh. In 1948 she had once shown a gross painless haematuria and a right-sided nephrolithiasis. Physical examination revealed tenderness on the right sacrum and the right flank, the patient's general condition being good. Laboratory examinations were normal, except for a slightly increased sedimentation rate (25 millimeters after one hour). X-rays showed an obvious nephrolithiasis: a small calcification projected at the lower part of the right kidney and an osteolytic lesion was seen in the right sacral and iliac bone region. A second osteolytic lesion was found in the left femur.

Five days later, the patient suffered a spontaneous fracture of the left femur and was sent to our Orthopaedic Department for further treatment. Notwithstanding the possibility of a multiple myeloma or a metastatic disease, we carried out an osteosynthesis with a Küntscher nail and a frozen cortical homograft on the 19th November 1959. We did this for two reasons: the good general condition of the patient and the fact that malignant disease was not yet established. A biopsy of the lesion in the femur was taken during the operation. At that time, no definite diagnosis could be made by microscopic examination, but multiple myeloma could be excluded.

The patient was sent again to the medical department, for further diagnostic examination, and especially a search for the primary tumour. All investigations remained nega-

tive. The excretory urograms at that time (1960) showed no obvious pathologic changes. On reviewing these urograms, we noticed a calyceal deformity on the lower part of the right kidney, and again the small calcification projected on the lower edge of the right kidney.

Very important is the evolution of both osteolytic lesions after the osteosynthesis with the homograft. We verified the assimilation of the homograft: The femur was reconstructed with callous formation in and around the fracture and there was evidence of healing and recalcification of both osteolytic lesions.

Four months after the operation we took two biopsies by puncture in the sacral lesions. Histologically, the bone structure was almost normal. No tumour cells could be found. The patient was discharged in April in a good general condition, but without a definite diagnosis.

In 1963 the patient was admitted to another hospital because of recurrent haematuria. A large tumour of the lower part of the right kidney was found and in October 1963, a nephrectomy was performed. The small calcification seen on the excretory urograms in 1960 was found in the tumour. On microscopic examination the tumour proved to be a typical hypernephroma (renal-cell tumour).

Recently, the biopsy specimen taken from the left femur was examined by a team of pathologists that were unaware of the hypernephroma and the nephrectomy. They concluded that necrotic tissues were present with areas of tumoral metastatic cells, probably a metastasis of a hypernephroma.

Spontaneous Remission of Solitary Bony Metastasis After Removal of the Primary Kidney Adenocarcinoma

DOOLITTLE KH

Journal of Urology 116(6): Dec 1976; 803-804

Extracted Summary

The second case of spontaneous remission of a biopsy-proven osseous metastasis from a renal carcinoma is reported. The unusual feature of the patient presenting with a right varicocele and no hematuria is extremely rare.

SELECTED CASE REPORT

A 49-year-old man (B. R.) was first seen in 1967 with a ureteral calculus that passed spontaneously. He was seen in August 1970 for a 1 1/2 year history of an enlarging right varicocele and a painful left arm. He was admitted to the hospital for diagnostic study and treatment.

Physical examination revealed only the right varicocele. Urine showed no red cells, with a normal hemogram and blood urea nitrogen. An initial excretory urogram (IVP) was read as normal after careful comparison with

the previous retrograde pyelogram. The patient was taken to the operating room for ligation of the right varicocele.

During further evaluation for the cause of the right varicocele an osteolytic lesion of the left humerus was found. Biopsy revealed a vascular metastatic adenocarcinoma of the kidney. A high volume IVP with nephrotomograms now demonstrated a tumor on the medial lower pole of the right kidney. Chest x-ray, bone survey and liver scans were negative for further metastatic disease. The patient was returned to the operating room for an

abdominal radical right nephrectomy. Convalescence was uneventful except for a wound infection. Follow up studies 6 weeks postoperatively revealed that the bony lesion had

decreased in size. It had completely disappeared on studies 6 months later and has not recurred to date. The lungs have remained free of metastatic disease.

Spontaneous Regression of Liver Metastasis from Renal Carcinoma

RITCHIE AW; LAYFIELD LJ; DEKERNION JB
Journal of Urology 140(3): Sep 1988; 596-597

Extracted Summary

Idiopathic regression of metastases from renal carcinoma is rare and usually involves lung metastases in men with a good performance status following removal of the primary tumor. We report a case of spontaneous regression of a biopsy-proved liver metastasis that had appeared several months after removal of primary renal carcinoma.

In a review article by Fairlamb (*Cancer* 47(1981), 2101), 67 documented cases of spontaneous regression of renal carcinoma were reviewed. The sites of metastases were the lung in 60 cases, bone in 3 cases and skin, liver, thigh and intestine in 1 each. Oliver has estimated that the rate of spontaneous regression of renal tumors and metastases is approximately 7% (Proceedings of the American Society of Clinical Oncology 6 (1987), 98). He followed 69 patients at monthly intervals without treatment and noticed objective evidence of unexplained regression in 5. Regression was complete in 3 cases and partial in 2, lasting 48, 36, 11, 9 and 6 months.

SELECTED CASE REPORT

A 52-year-old white man presented with left loin pain, bouts of sweating and anemia. Investigation revealed a 10-centimeter solid tumor in the upper pole of the left kidney. A chest x-ray and abdominal computerized tomography (CT) scan showed no evidence of metastases. The liver and the right kidney were normal.

Left radical nephrectomy and lymph node dissection were performed on November 12, 1986. At operation there was evidence of tumor penetration of Gerota's fascia but no evidence of intra-abdominal metastases. The liver was normal to palpation. Tumor extension to the renal vein was obvious. Histology revealed a predominantly clear-cell renal carcinoma with many mitotic figures and evidence of invasion of the renal capsule, perinephric fat and fascia. The adventitia of the renal artery also contained tumor. Fourteen lymph nodes were negative for tumor (T3bN0M0).

Right upper quadrant pain developed 2 months postoperatively and investigation revealed abnormal liver enzymes but a normal bilirubin. An abdominal CT scan

4 months postoperatively showed a lesion in the right lobe of the liver suggestive of metastasis. A chest x-ray was normal. A CT guided needle biopsy with a 19.5 gauge EZM biopsy needle contained cells that were similar on conventional stains to cells within the primary tumor. Sections were stained with the peroxidase-antiperoxidase method using antibodies to alpha₁ antitrypsin and alpha-fetoprotein, and appropriate controls. The cells considered malignant on hematoxylin and eosin sections were negative for alpha₁ antitrypsin and alpha-fetoprotein.

Therefore, the liver lesion was diagnosed as a metastasis and the patient was considered for an immunological protocol for metastatic renal carcinoma. Before starting the protocol a repeat CT scan was reported as showing no abnormality within the liver. The technique of CT imaging was considered comparable for the 2 scans, although they were performed on different CT scanners. A CT scan 8 months postoperatively showed no abnormality of the liver. The patient was asymptomatic at 9-month follow-up.

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Spontaneous Regression of Pulmonary Metastases from Renal Cell Carcinoma
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Urology 33(2): Feb 1989; 141-144

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OLIVER RTD; NETHERSELL ABW; BOTTOMLEY JM
British Journal of Urology 63(2): Feb 1989; 128-131

Spontane Rückbildung der Lungenmetastasierung bei einem Nierenzellkarzinom mit Expektion eines Teils der Metastase
EISSLER M
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MÜLLER GA; DIEM U; FRITZ U; WALTER E; WALLER HD
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Surveillance as a Possible Option for Management of Metastatic Renal Cell Carcinoma
OLIVER RTD
Seminars in Urology 7(3): Aug 1989; 149-152

Spontaneous Regression of Cancer
PAPAC RJ
Connecticut Medicine 54(4): Apr 1990; 179-182

OTHER URINARY TRACT NEOPLASMS

Spontaneous Regression of Pulmonary Metastases from Transitional Cell Carcinoma

SMITH JA JR; HERR HW
Cancer 46(6): Sept 15 1980; 1499-1502

Extracted Summary

Spontaneous regression of metastatic cancers occurs rarely and has been reported only once for pulmonary metastases from transitional cell carcinoma. Two cases of spontaneous complete regression of lung metastases from transitional cell carcinoma are presented. In one case, regression occurred after a course of radiation to the primary bladder cancer, but in the other patient, lung lesions disappeared without treatment to the primary or metastatic cancers. The factors that alter the tumor-host relationship to allow spontaneous regression of cancers are unknown, but observation of these phenomena may help reveal parameters that influence tumor progression in the majority of cancer patients.

SELECTED CASE REPORT

A 72-year-old Caucasian male (R. V.) was evaluated in October of 1977 because of hematuria and right flank pain. One year earlier he had undergone a segmental ureteral resection for a high-grade ureteral tumor at another hospital.

Intravenous pyelography showed a filling defect and obstruction of the right ureter near the pelvic brim. Bone scan, liver function tests, and chest x-ray failed to demonstrate metastatic disease. A right nephroureterectomy was performed and multiple large para-aortic lymph nodes were removed. Histologically, the ureteral lesion was a grade IV transitional cell carcinoma and there was extensive involvement of the retroperitoneal lymph nodes.

He was readmitted to the hospital in June 1978 with weight loss, weakness, and anorexia. A chest x-ray demonstrated multiple, large metastases in both lungs.

No therapy was instituted at that time, but he showed a gradual improvement in his clinical condition. A chest x-ray taken in October 1978 was normal and indicated complete resolution of all pulmonary metastatic disease.

Since then he has continued to do well clinically. However, his chest x-ray in April 1979 again showed metastatic disease with mass in the left lower lobe. This has been stable for four months at the time of this writing, and he remains asymptomatic.

Spontaneous Resolution of Multiple Bladder Neoplasms

STAFF WG; MORRIS JA

British Journal of Urology 56(1): Feb 1984; 50-53

Extracted Summary

A unique case is reported in which multiple well and moderately well differentiated stage I papillary transitional cell carcinomas of the bladder underwent total spontaneous regression. Various histological features of the case suggest an immunological basis for the regression.

SELECTED CASE REPORT

The patient, a retired builder's labourer, presented in January 1977 with haematuria of a painful and profuse nature. He had previously enjoyed good health. The investigations showed blood urea 6.2 mmol/l, haemoglobin 9.0 grams and packed cell volume 29.6 liters. Cytological examination of the urine showed numerous atypical transitional cells.

Intravenous urography showed normal functioning, non-obstructed kidneys, but evidence of extensive neoplastic involvement of the bladder, particularly in its lower half.

At cystoscopy there were several extremely large, coarsely fronded lesions over the trigone, posterior wall and fundus of the bladder and numerous smaller lesions in between. Little normal mucosa could be seen and the trigone was totally obscured. The prostate was minimally enlarged and the posterior urethra free of tumour. Bimanual examination revealed no palpable masses. Biopsies, taken from several of the tumours separately, showed fragments of a moderately well differentiated papillary transitional cell tumour.

In view of the diffuse nature of the bladder involve-

ment, cystectomy was advised. Three days prior to the planned operation the patient suffered what in retrospect must be considered a timely pulmonary infarction. At no stage did he become hypotensive, but after recovery and reinforced by the fact that he was no longer bleeding or experiencing any other bladder symptoms, he declined further treatment.

One year and one month later he was readmitted at the request of his general practitioner with difficulty with micturition. He was observed to be in surprisingly good condition with no abnormalities on physical examination. Blood urea was 6.2 mmol/l and haemoglobin 14.9 grams. Since his discharge from hospital earlier he had experienced no further haematuria. The IVU was unexpectedly normal.

At cystoscopy the bladder was entirely free of neoplasia and of normal capacity, with no evidence of residual scarring or deformity. There were, however, three small papillary lesions on the bladder neck (the bladder neck was clear at the earlier cystoscopy). These were resected. He made a good postoperative recovery. A review cystoscopy 6 months and 18 months later showed no further tumour.

SUPPLEMENTAL REFERENCES OTHER URINARY TRACT NEOPLASMS

Spontaneous Disappearance or Retrogression of Bladder Neoplasm: Review of the Literature and Report of Three Cases

ABESHOUSE BS; SCHERLIS I

Urologic and Cutaneous Review 55(1): Jan 1951; 1-11

Regression of Cancer of the Urinary Bladder Following Ureterointestinal Anastomosis

FORT CA; HARLIN HC; ATKINSON HD

Journal of Urology 66(5): Nov 1951; 688-691

Rückbildung von Blasentumoren nach Harnableitung

CRONE-MÜNZEBROCK H; BOEMINGHAUS H

Zeitschrift für Urologie und Nephrology 46: 1953; 386-91

Ein Beitrag zur Spontanen Rückbildung von Blastentumoren nach Harnableitung

SCHMITZ W

Zeitschrift für Urologie und Nephrology 56: 1963; 433-437

Spontaneous Regression of Pulmonary Metastases from Transitional Cell Carcinoma of the Bladder

LOME LG; NAVANI S; ARAL IM

Cancer 26(2): Aug 1970; 415-418

Neoplasms of Female Genital Organs

UTERINE NEOPLASMS

Diet in Cancer—First Paper: Full Text of Nine Cases

CUTTER E

Albany Medical Annals 8: July 1887; 218-230

Extracted Summary

This paper is intended to be practical, giving histories of some cases where there were special diets adopted which seemed to be beneficial. It is offered as a contribution to medical knowledge to point out the way in which the writer thinks that organic disease should be approached—that is, through the function of nutrition; to show that alimentation is an agent of tremendous power, and to impress the idea that diseased tissues are sometimes amenable to food-influences even in apparently desperate instances. In a second paper the theoretical side of the question will be considered.

SELECTED CASE REPORT

Case 9. Case of Cancer of the Uterus, with Serious Heart Complications. Fed against the Appetite with Tenderloin Steak, Broiled. Result, Cure of Uterine and Cardiac Lesions.

“Some years ago a middle-aged mother of a large family lay sick in bed of great grief at the loss of her last daughter, who died under peculiar circumstances. There were present cardiac hypertrophy and insufficiency of the left auriculoventricular valve; severe attacks of angina pectoris, when it seemed that death was near. The objective lesions, other than those named, were retroversion,

engorgement, hardening, eversion of the os uteri, and behind the uterus four small, hard, marble-like tumors; very severe pain, sharp and stinging, in the pelvis mostly; profuse vaginal discharge, not bloody; menorrhagia. Added to this there was loss of appetite so complete that every thing in the nature of food was loathed, even milk being repulsive; loss of flesh and strength, being unable to rise erect for ninety days; inability to lie on either side for most of the same time; nausea; legs cold and sweaty up to the knees; oftentimes great stomach distress, with wind colic; urine high colored and of rank smell, as if putrid; bowels

constipated; a terrible feeling of nervous restlessness, causing her to move her feet rapidly up and down in the bed; visitors coming and assuring her by their looks and actions that she was about to die. Added to this there was cancer in her family, her father having died of cancer of the stomach and a maternal grandmother of cancer of the breast. She was put on general and local treatment, and it was faithfully carried out in connection with good nursing; but she gradually grew worse; until at the expiration of three months the symptoms were so alarming that I was obliged to take strong and decisive grounds, and to tell her: 'You must eat, or die of cancer of the womb. Make up your mind to one or the other.' She decided to live and to eat, eating against her appetite, but with her intellect and reason and the advice of her medical attendant. She began with tenderloin steak, broiled and cut up very fine. The most she could take at first was a quantity represented by two teaspoonfuls; this she swallowed by a desperate effort, her stomach rising against it. She was fed thus every four hours. Even after she had fed thus for weeks she felt she would rather die almost than eat, but battled against appetite by sheer force of will. The only way she could get down the beef was by swallowing one mouthful of lager beer, which was the only article that did not go against the stomach. The quantity of meat was increased

gradually, and she was fed two months against her appetite. The nausea, however, left in about three or four weeks, and at this time she was able to move some, and was placed in a Cutter invalid chair part of the day. After two months of feeding, she was taken carefully to the seashore, and there she began to get an appetite, but it took one year before she could walk five hundred feet.

"No person could have eaten so thoroughly against the appetite as this case did, and it was only from fear of death by cancer, whereof her father died, that made her struggle for life with all her powers. It was not death she feared, but the form, from which she revolted with horror. This is rather difficult to understand, but it is none the less true."

Results: "1. Heart normal in size. 2. Valvular insufficiency hardly perceivable. 3. Angina pectoris gone. 4. Uterine disease relieved, tumors disappeared, uterus mobile, discharges normal. 5. Urine clear as champagne, 1.015 to 1.020 specific gravity; no odor; no deposit on cooling. 6. Restoration to active duties in her position as housekeeper and mother of the family. No medicine was given after the food treatment, save Hoffman's anodyne when she had palpitation of the heart and suffocation of breath; the severe, agonizing pain left soon after the diet was begun."

Regression and Calcareous Degeneration of Carcinoma

WELLS BH

American Journal of Obstetrics and Diseases of Women and Children 57:
Mar 1908; 403-406

Extracted Summary

A patient whose clinical diagnosis was inoperable carcinoma of the uterus, yet who demonstrated a degeneration and natural cure of the carcinoma is reported.

SELECTED CASE REPORT

Ms. H.P. was referred to me in December, 1898, for operation for an indeterminate tumor of the uterus which she had noticed for about a year, and which was causing pain and hemorrhage. She was a nullipara; gave her age as thirty-three, but looked much older. To the beginning of the present trouble her health had been good. There was no history of any pelvic inflammation and no evidence or history of syphilis or gonorrhoea on the part of either wife or husband. There was no history of tuberculosis in the patient's family.

Physical examination showed heart and lungs normal; kidneys and urine normal; liver normal; spleen not enlarged; upper abdomen normal. Temperature was normal. The uterus was immovable in the pelvis with the fundus extending about two inches above the pubis and rough, irregular, and nodular in outline. I have no record of the condition of the cervix but the bimanual examination caused bleeding.

The clinical diagnosis was inoperable carcinoma of the uterus, but, to satisfy her physician and to give the patient the benefit of any possibility of error, I consented to an exploratory abdominal section. On opening the abdomen the fundus of the uterus was found enlarged and nodular, the nodules presenting the granular roughness and yellow-pink appearance common in carcinoma. These masses extended into the broad ligaments and to adherent coils of intestine and omentum. The accessible pelvic glands were enlarged. As it was plain that all of the neoplasm could not be removed the case was considered inoperable and the abdomen was closed after having removed a small nodule for examination. The microscopic examination of this nodule showed carcinoma of the glandular type. The patient recovered without trouble from her section and was sent home, her friends being given a gloomy prognosis.

Instead of growing worse she improved for a time and in consequence I was discredited and lost sight of her.

On June 25, 1903, four and a half years later, she came into my office. She was thin, pale, and weak. She said that after my operation she had improved for several months and had then failed rapidly. Toward the end of 1902 she went to an irregular in Brooklyn, who guaranteed to cure her for \$1400, and she was operated on by him by way of the vagina. She did not know what was done but thought her womb was removed. She was not cured, however, and had come back to me for an examination and an opinion. I found the lower abdomen occupied by a hard, irregular mass and above this many hard, irregular, movable bodies of varying size. On attempting a vaginal examination the finger found the vagina filled with a soft, friable, easily bleeding mass, whose base could not be reached, which distended the canal and came down to the perineum. A portion of this mass was broken off by the finger, but unfortunately, as it now seems, was not submitted to the microscope, the diagnosis at that time seeming clear.

I did not hear from Mrs. P. again until the winter of 1904-5 I accidentally learned that she was still alive and in the care of Dr. W.I. Cooke, of Port Washington, he being at that time connected with my clinic at the Polyclinic. To Dr. Cooke I am indebted for the further history of the case and for the record of the partial autopsy that was permitted. In a letter to me he says: "I saw Mrs. H.P. first in November 1903, being called to check a flow of blood from the vagina. The bleeding was controlled by a gauze tampon. These hemorrhages occurred irregularly and were not always alarming. The vagina was filled with a softish mass which bled easily. The abdomen was distended. The contour of belly wall was uneven and

abdomen seemed filled with irregular shaped masses, hard to the touch, easily felt between the fingers, movable and in size from a lemon to small particles. The number was beyond counting. She had severe obstipation. Temperature was normal. Lungs normal except for a moderate chronic bronchitis. Heart rate variable, ranging from 80 to 140, being governed largely by degree of pain in abdomen. Mrs. P was rarely confined to bed and did all of her household work except washing. Her ups and downs continued until death, March 22, 1905, at which time the masses in her abdomen had practically disappeared."

"Postmortem examination, body of H.P., age thirty-eight. Emaciation, extreme. Abdomen, sunken and smooth externally. On opening, intestine found much congested, small gut easily torn in places. Peritoneum covering intestinal and parietal wall studded with small, round, hard, white particles, size of mustard seed to a bean. The mesentery was a dense fibrous mass several inches in thickness. This was covered with masses of the little particles. The pelvis was empty with no evidence of uterus, tubes, or ovaries. There was no mass in the vagina and its mucous membrane was everywhere smooth. The intestines contained some hard, dry, fecal matter, but no 'tumors.'" Some of the "small, round, hard, white particles" were removed from various places in the abdomen and submitted to Dr. Jeffries, Pathologist to the New York Polyclinic, for examination. It was found that the little masses were so infiltrated with calcareous material that they had to be decalcified before sections could be made. Sections showed a glandular carcinoma infiltrated with many calcareous pearls. The carcinomatous tissue stained poorly.

SUPPLEMENTAL REFERENCES UTERINE NEOPLASMS

Un Cas Remarkquable de Guérison d'un Cancer Uterin
a la Suite de L'Apparition d'un Erysipele

BIDLOT

Gazette medicale de Liege 5: 1893; 232

Unerwartete Heilerfolge bei Inoperablen
Uteruskarzinomen

WEINDLER F

Zentralblatt für Gynaekologie 31(22): 1907; 632-635

Zur Lehre von der Spontanheilung der Karzinome

THEILHABER A

Deutsche Medizinische Wochenschrift 38: 1912; 1240-1241

Unusual Case of Cancer with Metastases 19 Years
After Hysterectomy for Primary Tumor

TSCHUDI-MADSEN S

Nordisk Medicin 36: 1947; 2394-2395

Spontaneous Regression of Cancer

BRUNDSCHWIG A

Surgery 53(4): Apr 1963; 423-431

Spontaneous Regression of Advanced Endometrial
Carcinoma

BELLER U; BECKMAN EM; TWOMBLY GH

Gynecologic Oncology 17(3): 1984; 381-385

A Case of Apparent Disappearance of Carcinoma of Cervix

IBOTSON ECB

Lancet 1: Feb 10 1917; 224

Extracted Summary

A paper read before the Section of Therapeutics and Pharmacology of the Royal Society of Medicine in 1908 by Mr Wippell Gadd and another author stated that the viola leaf (*viola quercitrin*) contains a glucoside which is an antiseptic and has the property of easing the pain and lessening the discharge of uterine cancer and also of keeping the odor sweet for a long period after it has been passed, but they did not find that it had any curative effect. The fact that in the case reported here the nodules disappeared from the scar on the thorax is very remarkable. How far it was due to the violet-leaf infusion combined with other measures and how far it might be considered a temporary or permanent disappearance of carcinoma is difficult to say, but the case seems worthy of recording.

SELECTED CASE REPORT

The patient, a married woman aged 45, had her left breast amputated for cancer in 1914 at Liverpool, and has been under my observation ever since. In July 1916, symptoms of uterine cancer appeared, and also nodules developed in the operation scar. Offensive vaginal discharge tinged with blood, obstinate constipation and vomiting, painful and difficult micturition, and pain in the left sciatic nerve.

Another medical man, Mr. W.R. Williams saw her with me in August and agreed that there was extensive ulceration of the cervix, carcinomatous in character and that the uterus was fixed in the pelvis and appeared immovable. We agreed that she was too weak to stand another operation so extensive as hysterectomy, and that

palliative treatment combined with enemas and vaginal douches was all that could be done. I also suggested vaginal injections of an infusion of wild violet leaves [*viola quercitrin*], and that the patient should also take a little infusion of the violet leaves internally. This has been persevered with, and she had steadily improved. The nodules in the scar disappeared in September and I can find nothing abnormal in the cervix, and the uterus is now freely movable. Also the constipation and vomiting have quite ceased. She has still pains in the left sciatic nerve area, and is exceedingly thin, as indeed she always has been. But she is taking plenty of nourishment and the pain in the nerve is not so great as to require morphia. She sits up in a chair daily.

Spontaneous Regression of Carcinoma of the Cervix: Report of a Case

BLACK PE; BROWN EA

Journal of the Maine Medical Association 50: Oct 1959; 358-361

Extracted Summary

Sixteen months following a vaginal hemorrhage in a (then) 61-year-old patient, a diagnosis of squamous cell carcinoma of the cervix, Grade II, was made, and confirmed by two separate biopsy and microscopic studies of the tissues removed. Standard treatment with eighteen x-ray exposures totaling 4,140 Roentgen units, and 3,600 milligram hours of radium was without effect as judged by re-examination one year later. At some time during the ensuing two years, however, there was a complete regression of the carcinoma. Subsequent roentgenograms and physical examinations, and, as well, two explorations of the abdomen, during an appendectomy and a cholecystectomy, proved neither primary nor secondary growths to be present. The patient reacted anaphylactically to the use of Diodrast.

Although the intractable pain originally present required for its amelioration daily doses as great as 16 grains of morphine sulfate, the patient, when informed that the original tumor was no longer present, immediately, completely, and with no signs or symptoms of narcotic withdrawal, needed neither substitute analgesic drugs nor treatment.

During the subsequent ten years, no medicines, excepting those needed for each surgical procedure, have been administered or taken. It is suggested that there may be a mechanism common to tumor regression, narcotic tolerance, and some allergic phenomena. Recent studies concerned with the immunological aspects of malignant disease point to this area of exploration.

SELECTED CASE REPORT

In 1946, at the age of 59, a widow suffered from an attack of "angina." For this, bed rest and limited "bathroom privileges" were prescribed.

On February 15, 1948, she was admitted to the Eastern Maine General Hospital at Bangor for diagnostic study and treatment of a blood-streaked vaginal discharge. This had been present daily for sixteen months following a vaginal hemorrhage which had lasted almost twenty-four hours. She had been at first reassured that she was suffering only from "drainage" due to the menopause, which had become obvious during her fifty-fourth year. For three months, she had suffered from a moderate degree of pain in the general area of the lower right and also left abdominal quadrants. The pain was intensified during examination by rectum. One week before her admission to the Hospital, she had learned that she "had a tumor."

Her mother had died from natural causes at the age of 90, and her father from a cerebrovascular accident when 87 years of age. Of the ten siblings, two sisters and one brother were living and well. Four brothers had died of unknown causes, and three others of cardiac disorders associated with angina. There is no family history of malignant disease, or of acute or chronic disease suggestive of any epidemiological factors.

The patient herself had lived an uneventful life, excepting that during 1943 a "tumor" had been removed from the left arm. She had twice been pregnant, and had successfully given birth to two children, alive and well, and at the time of admission respectively aged 35 and 40 years. Excepting for "constipation," she presented no other complaints.

She said that she had suffered from the pain in the lower abdomen for at least two and one half years. At the time of the vaginal hemorrhage, no examination had been done. Only bed rest had been prescribed. But the bloody, watery discharge, although less, continued. It was, however, present in such quantity that with the patient standing, a pool of it would form on the floor.

The report of the physical examination notes that she was "well developed and well nourished." The skin appeared "bronzed." In each eye there was a well-marked arcus senilis. There was no deviation from the normal in all other organs and systems subjected to complete routine examination. The blood pressure was 172/100.

The lower part of the abdomen was flat, rigid and

tender. No masses were palpable. Following the rectal and vaginal examinations, the patient's physician described the cervix as "hard and rocklike." There were visible, following further vaginal examinations, friable, cauliflower-like tumors replacing and projecting from the circumference of the cervix. The cervical canal was sloughed out, and wide open. A green mass, continuous and presumably a part of the larger pelvic organs and tissues, the uterus, and its adnexa, filled the vaginal vault so that no normal tissue could be seen. All of the local organs were fixed in the state so aptly described as a "frozen uterus."

On February 16, 1948, and preceded by spinal anesthesia, a dilatation and curettage produced only more of the green, sloughing amorphous material. Samples of the "projections" were taken for biopsy and microscopic examination. On February 20, 1948, the patient was temporarily discharged from the hospital. Acetylsalicylic acid and Codeine were prescribed for the continuously present moderately severe pain.

The pathologist reported on the specimen sent him as follows: "S-48-546. February 17, 1948. Gross Description: Specimen consists of two fragments of gristly, white tissue; the largest measuring 1.0 x 1.0 x 0.3 centimeters."

"Microscopic Description: 2 areas, 2 slides, paraffin. Sections of cervix reveal a hyperplasia of the surface epithelium beneath which there is a fairly diffuse infiltration of lymphocytes and occasional plasma cells. Deep in the stroma there is a fairly sharply outlined, but non-encapsulated tumor nodule composed of nests of epithelial cells separated by a loose, slightly basophilic stroma. Mitotic figures are found in the cells. There is a slight attempt at pearl formation. Diagnosis: Squamous cell carcinoma of cervix, Grade II."

The patient was re-admitted to the Eastern Maine General Hospital on March 3, 1948, and a second biopsy of the cervix was done. The second specimen was similarly reported.

"S-48-792. March 4, 1948. Gross Description: Specimen consists of four small flakes of grayish-white tissue, the largest measuring 0.2 x 0.3 centimeters."

"Microscopic Description: 4 areas, 2 slides, paraffin. Sections of cervix reveal numerous islands and columns of tumor cells dipping down from the epithelial surface. The tumor cells are quite well differentiated and form numerous epithelial pearls. The stroma is quite edema-

tous and is infiltrated with lymphocytes and plasma cells and occasional polymorphonuclear cells. Diagnosis: Squamous cell carcinoma of cervix, Grade II."

Roentgenograms of the lumbosacral spine have been taken in order to exclude the presence of metastases. The report reads: "The lumbar spine shows good vertical alignment with moderate proliferative thickening about the vertebral borders. There is evidence of calcification about the abdominal aorta. There are no bony changes in the lumbosacral structures suggestive of metastatic invasion.

During the patient's third admission, March 3 to 25, 1948, the original diagnosis was reconfirmed, and the patient was treated with x-ray, directed on alternate days to the anterior and posterior aspects of the pelvis. The report shows that the exposures consisted of 200 kilovolts filtered with 0.5 millimeters of Copper and 1.0 millimeter of Aluminum. The duration of each application is given as 10 minutes for a total of 230 Roentgen units, the total of 4,140 units being divided equally between the anterior and posterior aspects for the eighteen days of treatment extending from March 5 to 25, 1948.

The patient was re-admitted on April 20, 1948. The diagnosis was re-confirmed. Additional treatment consisted of radium insertion (3,600 milligram hours) applied during her fifteen days of hospitalization ending May 5, 1948. The pain was described as becoming more severe. It was unbearable and could only be endured when morphine was administered by injections. The amounts needed for control of pain increased. Within a period of some months each single injection comprised two or more grains. The total amount used in any twenty-four hour period amounted to sixteen grains.

Following re-admission to the Hospital on March 29, 1949 (that is, one year later) the initial diagnosis of a squamous cell carcinoma of the cervix once more was re-confirmed.

A note was made of the obvious addiction to morphine. The report of roentgenograms of the lumbar spine then taken read: "The lumbar spine shows relatively good vertical alignment. There is quite a bit of proliferative arthritic change about the vertical borders and the lumbosacral area shows evidence of arthritic thickening. No changes in the bone densities are diagnostic of metastatic invasion. There is quite marked sclerosis of the abdominal vessels."

No treatment was given and the patient was discharged with the prescription of further bed rest and the use of additional morphine for the control of the obvious and by now intractable pain. For a period of eighteen months, the patient continued to complain of this same severe pain, limited to the suprapubic area and referred to the lower parts of the vertebral column. She suffered also from continuous and "unremitting constipation." The total amount of morphine administered during each twenty-four hour period was maintained at a level of sixteen grains.

When admitted to the Mount Desert Island Hospital on August 2, 1950, the patient appeared thin, pale, and apprehensive.

All the organs and systems examined were reported as normal, excepting for the tenderness of the suprapubic region, examination by palpation of which caused spasm.

Re-examination of the vaginal vault, however, proved it to have become smooth, and typically pink. The normal mucous membrane had been replaced by scar tissue which obliterated the cervix. There was no evidence of any erosion, or of any discharge, bloody or otherwise. By digital examination, the uterus could be felt as small and fixed by fibrous bands. The Fallopian tubes and the ovaries could not be distinguished by palpation. The examination by rectum confirmed that done vaginally.

The roentgenograms of the chest, lumbar spine and colon were reported upon by the radiologist as follows: "There is no evidence of metastatic disease in the dorsal spine or of the thoracic cage. There is no evidence of metastatic disease in the pelvis or lumbar spine. Fluoroscopic and film examination of the colon fails to reveal any evidence of stricture or organic lesion. The intravenous urogram was not done because of a slight anaphylactic reaction which the patient experienced at the beginning of the administration of Diodrast."

The constipation was ameliorated by use of enemas given frequently over a period of eleven days. All were effective, and what is described as a "literally enormous amount of hard fecal material" was ejected.

A review of the history, and the gross and microscopic examination left no doubt that the initial and subsequent diagnoses had been correct. The treatment by radiation was certainly not enough to cause either an immediate or a delayed effect, especially since no changes had occurred for at least one year following both the application of radium and the exposure to x-ray. The only warranted conclusion was that the growth, previously present, had evidently undergone a spontaneous regression. But the problem of the undoubted morphine addiction needed solving.

For the first two days of hospitalization, the patient was given Pantopon (grain 1/3) on four occasions. She was, for one day, given injections of saline solution and the decision was then reached that she be told that there was no present evidence of the malignant growth. Of her own volition, she refused further analgesic medicine of any type. She suffered from no signs of withdrawal, although she went from the noted daily dose of 16 grains of morphine to none whatsoever during a period of four days.

She was subsequently re-admitted to the same Hospital for an appendectomy which she successfully weathered, although she delayed her hospitalization until her "skin literally turned green." During the next year, she suffered from gall bladder symptoms and at the time of the cholecystectomy, the abdominal cavity was explored. Excepting for adhesions, no abnormality was discovered.

At her present age of 73, she travels six miles daily by bicycle to work in a sardine factory where, "on piece work, she outstrips the younger women." She earns additional money by digging clams. She saws her own firewood, and although several years ago she gave up the drinking of

beer, she continues to smoke two to three packages of cigarettes daily. Eleven years have elapsed since the original diagnosis had been established, and thirteen years have passed since the appearance of the first signs of any abnormality.

Two Cases of Malignant Tumors with Metastases Apparently Treated Successfully with Hypoglycemic Coma

KOROLJOW S

Psychiatric Quarterly 36: 1962; 1, 261-271

Extracted Summary

This paper is a brief clinical report of the apparently successful treatment by insulin coma of malignant growths in two patients: a woman of 53 with metastasized adenocarcinoma of the cervix, and a woman of 62 with metastasized melanoma of the left leg. Both diagnoses were confirmed by tissue examination; and, in the case of the adenocarcinoma, biopsy confirmed the disappearance, after treatment, of the cervical malignancy and its replacement by normal cells.

The author originally treated both patients for depressions, following unsuccessful operation for malignancy in the first case and the diagnosis of malignancy in the second. In both cases, there was remission of the mental, as well as of the cancer, symptoms.

The material presented here tends to show: (1) that the enzymes of malignant cells may be considered the key point in the problem of malignancy, and (2) that these enzymes can be inactivated by an increased concentration of oxygen, with the consequent destruction of malignant tissues.

The amount of clinical material presented is insignificant, but the results may warrant full-scale research in this field along clinical and biochemical lines.

SELECTED CASE REPORT

Case 1: The first case was that of A. C., a white woman of Italian extraction, aged 53. She was first examined by the writer on July 26, 1957. About six weeks before, she had undergone an operation at the New York Hospital, Cornell Medical Center because of adenocarcinoma of the cervix. The diagnosis was established by biopsy; and during the operation, it became obvious that nothing could be achieved by it, as the cancer had diffusely infiltrated the surrounding structures and had metastasized in the lymph glands of the abdominal cavity.

The operative wound was closed and, as the patient refused radiation therapy, the treatment prescribed was only symptomatic. She was taking large amounts of codeine with aspirin, and a variety of other analgesic drugs. Although the medication was making her more comfortable physically, it nevertheless did not help mental difficulties which had started about three years before, and had, at first, been characterized by general loss of interest, mild depression and irritability. There was a gradual loss of weight, which had become especially pronounced recently. In the three months before the operation, she lost 16 pounds. For 10 months before the operation her general emotional discomfort, restlessness, depression and agitation were gradually but persistently becoming

more and more pronounced. She could sleep only with the aid of barbiturates (seconal sodium), and there was a marked loss of appetite. Shortly after the operation all her symptoms became pronounced to such a degree that they were finally recognized by her relatives as a serious mental illness.

Her family history showed nothing of significance except that her grandfather had died of cancer of the liver. He was reported to have been confused and disoriented before his death. At 16, A. C. had an appendectomy, at 21, a tonsillectomy. She had been happily married until her husband died in an accident about three years before the author saw her. She had four children. She was said to have "worried" all her life. She was five feet, four inches tall and weighed 126 pounds, while her usual weight before the illness was over 150 pounds. A neurological examination had essentially negative results except for markedly exaggerated deep tendon reflexes. There was paleness of mucous membranes and she was given weekly liver extract injections by her family physician who eventually referred her to the writer for psychiatric treatment. Her psychiatric diagnosis was involuntional melancholia.

In an attempt to do something for the patient, even if only to achieve a temporary lessening of her mental

symptoms, the author instituted a course of ambulatory (subcoma) insulin treatment. It was started four days after the first interview, on July 30, 1957, with 20 units given intramuscularly once daily in the morning. This amount was rapidly increased so that in about two weeks she was getting as much as 180 units a day, without, however, going into coma. By the end of the fourth week, an improvement, both of her mental and physical condition, took place. She became considerably less restless and agitated, and her depression completely disappeared. This change could have been ascribed to the psychological effect of the treatment, as the patient was aware of the fact that she was getting a lot of attention. But, strangely enough, instead of continuing to lose weight, she gained two pounds, felt stronger physically, and her appetite improved.

By the end of the fifth week, A. C. completely stopped taking all kinds of drugs and slept fairly well five to six hours a night. Her weight at that time was 131 pounds. At

the beginning of the sixth week, sharp changes in the amount of insulin given were made and the patient was allowed to go into real, although light, coma. The length of coma was a half hour at a time. The amount of insulin given remained at a level not exceeding 140-150 units a day, with the lowest blood sugar level readings at 22 mg% at the peak of the coma. After two and a half months of such treatment, five days a week, the patient had gained 32 pounds altogether (weight, 158 pounds). Her blood pressure was 125/75, her appetite was good; she slept well; and her mental condition was normal. Approximately one week after the course of insulin treatment was terminated, she was examined by her surgeon and he could not detect any signs of malignancy. A biopsy was done again, and it showed completely normal cellular morphology. The writer saw this patient again in March 1958, and she was well, maintaining the improvement achieved by the insulin. The writer received a card from her in December 1958, reporting that she continued to be well.

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MALIGNANT NEOPLASMS OF THE PLACENTA

Some Aspects of Chorion Epithelioma

BREWS A

Journal of Obstetrics and Gynaecology of the British Empire 57(3): June 1950; 317-321

Extracted Summary

A case in which a spontaneous cure of secondary vulvovaginal chorionepithelioma which developed after a normal labour is reported.

SELECTED CASE REPORT

Case I. Spontaneous 10-year cure of secondary vulvovaginal chorionepithelioma developing after a normal labour. I originally reported this case in my Blair Bell Memorial Lecture in 1939. The patient, aged 30 years, had had 5 normal labours, the last 38 days before her admission to hospital, with 2 secondary chorionepi-

theliomata of the vulva, one on the perineum, 3.5 centimeters in diameter, and the other involving the left side of the vestibule and the urethral orifice, 3 centimeters by 2 centimeters. These swellings were first noticed on the 24th day of the puerperium. On the 45th day of the puerperium I performed an abdominal panhysterectomy, removing

both Fallopian tubes and ovaries. I excised the posterior vulval mass. A hemorrhagic mass 3.5 by 1.5 centimeters was attached to the fundus of the uterus and projected into its lumen. The anterior vulvo-vaginal secondary was not excised as it was involving the urethra, but it was intended to treat it with radium as soon as the patient was convalescent from the abdominal operation.

However, 7 days after the operation it had undergone spontaneous regression to about one-third of its original size and at the end of 14 days it was represented by a thickening about the size of a split pea. Twenty-four days after the operation there was no visible or palpable evidence of its existence. The day before the operation a Friedman test was positive in a dilution of 1/1000 but negative in a dilution of 1/1500. The concentration of urine gonadotrophin fell rapidly after the operation and at the end of 6 weeks it was positive in undiluted urine but negative in a dilution of 1/10. Nine weeks postoperatively

it was negative in undiluted urine and has remained negative ever since.

The last test was carried out 1 month ago, that is 11 years and 3 months after the operation. At this time the patient and the child of the relevant pregnancy were both in excellent health.

Histological reports on the uterus were as follows: "Area of chorionic carcinoma replacing endometrium and part of myometrium. Portion of growth in a vein."

Report on the posterior vulvo-vaginal secondary as follows: "Secondary chorionic carcinoma in vagina." The original report from the uterine curettage a few days before the uterus was removed and from a biopsy taken from the anterior vulvovaginal deposit was as follows: "Uterine scraping showed typical chorionic carcinoma. Vaginal biopsy showed secondary malignant deposits near surface of epithelium and eroding it."

Spontaneous and Complete Regression of Extensive Pulmonary Metastases in a Case of Chorionepithelioma

JOHNSON WR

American Journal of Obstetrics and Gynecology 61: 1951; 701-704

Extracted Summary

Chorionepithelioma has long been considered a rare malignancy, and it remains one of the most challenging disease entities in medicine. Since the condition was first recognized by Sanger in 1889, the literature reveals numerous case reports which emphasize the difficulties of diagnosis and of prognosticating the clinical course in a given patient. Complete spontaneous regression of proved cancer is extremely rare (or nonexistent). Possible exceptions occur in chorionepithelioma. Even in this disease the reported instances of regression are rare.

A case is presented in which complete spontaneous regression of chorionepithelioma and pulmonary metastases occurred. This case is presented, not to confuse the literature further, but rather to emphasize a phase of this disease which occasionally takes place.

SELECTED CASE REPORT

A 43-year-old, white housewife (M. A., University Hospital No. 175436), para vi, gravida vii, was first seen in the University of Michigan Hospital Gynecology Department on July 19, 1949, with a chief complaint of vaginal bleeding.

Menarche had occurred at the age of 18 years, with regular menstrual periods of normal flow occurring every 28 to 30 days until the onset of her present illness. The patient's deliveries were uncomplicated, ending in normal full-term infants, the last being 2 1/2 years prior to admission.

Menstrual periods had been normal and regular through September 1948. The patient then developed amenorrhea until March of 1949. During this time she felt well and denied any of the usual signs or symptoms of pregnancy with which she was familiar. A normal five-day

period occurred in March of 1949, and what was thought to be a normal menstrual period began in April. However, a few days following the completion of this bleeding episode, the patient stated that she had the onset of daily vaginal spotting which continued until the time of admission in July of 1949. Beginning in June, there was increased weakness, fainting spells, nausea, anorexia, and loss of weight. There was no history of pulmonary symptoms such as hemoptysis, cough, or chest pain.

The past history revealed no previous serious illnesses or operations. Examination on admission was as follows: Fever of 102°F.; pulse 120; respirations 22; blood pressure 96/54. The patient appeared very pale, poorly nourished, and emaciated. Her sensorium was clear. Examination of the lungs revealed them to be clear to auscultation and percussion with normal motion of the diaphragm. The

heart was slightly enlarged and auscultation revealed a loud apical systolic murmur.

The abdomen was scaphoid with multiple striae and poor muscle tone. A firm, non tender, movable mass could be felt arising from the pelvis and extending about 4 centimeters above the symphysis pubis.

Pelvic examination revealed normal external genitals and a parous outlet with fair support. On inserting a speculum into the vagina, numerous blood clots were encountered. Following their removal, the vaginal mucous membranes appeared normal. The cervix was visualized as normal except for a reddened area on the anterior cervical lip which was biopsied. Upon bimanual examination the uterus was found to be enlarged to about 3 times normal size, with a firm mass 3 centimeters in diameter extending from the right posterolateral wall. Otherwise the pelvic organs appeared normal on palpation.

Laboratory data on admittance revealed a hemoglobin of 5 grams, white blood cell count of 6,500, catheterized urine negative, and blood Kahn test negative. The cervical biopsy was reported as polypoid glandular hyperplasia with no evidence of malignancy.

The patient received multiple blood transfusions between July 19 and July 25, 1949, with a rise in hemoglobin to 11.5 grams. Temperature and pulse also returned to normal. The patient continued to have daily vaginal bleeding.

Preoperative diagnoses included uterine myomas and the possibility of malignancy of the endometrium.

The patient was taken to the operating room on July 25, 1949, and a dilatation and curettage performed. The curettings appeared grossly normal without evidence of irregularity of the uterine cavity. Laparotomy revealed the uterus to be enlarged about 2 1/2 to 3 times above normal size, firm and congested. A hard, slightly bluish nodule about 3 centimeters in diameter extended from the right posterolateral wall. The adnexa were slightly adherent and varicosities were present in both broad ligaments. The ovaries were of normal size and appeared to be slightly cystic. A total hysterectomy, bilateral salpingo-oophorectomy and incidental appendectomy were performed. The patient tolerated the procedure well. Postoperatively she recovered rapidly.

Microscopic examination of sections taken from the

bluish uterine nodule revealed the appearance of malignant chorionepithelioma, infiltrating well into the musculature. There was a hypertrophic decidual reaction present on both ovaries without evidence of lutein cysts.

An Aschheim-Zondek test taken two days postoperatively was reported positive at a routine level. Stereoscopic x-ray examination of the chest revealed widespread metastatic neoplasm of both lung fields.

Following these reports, the case was presented at the Gynecology Tumor Conference. No irradiation or hormone therapy was given.

Examination at the time of discharge revealed but slight postoperative induration palpable at the vaginal apex. The patient's hemoglobin at this time was 11 grams. She was eating well and feeling much stronger.

She was next seen for a check-up examination on September 16, 1949. At this time she was feeling well and had gained 21 pounds. No vaginal bleeding or pelvic symptoms were reported. She had noted no pulmonary symptoms. Pelvic examination revealed a firm neoplastic-feeling nodule approximately 2.5 centimeters in diameter palpable high up in the rectovaginal septum. Biopsy of the nodule was not carried out. Stereoscopic x-ray examination of the chest on this visit again revealed extensive bilateral pulmonary metastases. Unfortunately, an Aschheim-Zondek test was not obtained.

The patient returned again for check-up examination on December 16, 1949. She was entirely asymptomatic. She had continued to gain weight and felt so much improved that she was carrying on her usual household activities. Pelvic examination revealed no palpable pathologic conditions. The previously described nodule in the rectovaginal septum had completely disappeared. Stereoscopic x-ray examination of the chest on this visit showed complete disappearance of the extensive pulmonary metastases. The Aschheim-Zondek biological test was negative at a routine level.

At the time of subsequent check-up examinations, April 4, 1950, June 13, 1950, and October 10, 1950, the patient was again in excellent health. The pelvis revealed no palpable diseased condition. Stereoscopic x-ray examinations of the chest again demonstrated normal lung fields, and the Aschheim-Zondek tests were negative.

Choriocarcinoma

An Unusual Case Recurring Nine Years After Subtotal Hysterectomy and Followed by Spontaneous Regression of Pulmonary Metastases

NATSUME M; TAKADA J

American Journal of Obstetrics and Gynecology 82(3): Sept 1961; 654-659

Extracted Summary

A case of choriocarcinoma with two unusual features is described: one is concerned with the 9-year dormancy of the trophoblastic elements, and the other with spontaneous regression of extensive pulmonary metastases originating from choriocarcinoma of the cervical stump.

SELECTED CASE REPORT

A 51-year-old housewife (R. H.), gravida viii, para vi, was first seen in our clinic on Oct. 5, 1954, with the chief complaint of vaginal bleeding.

Menarche had occurred at the age of 15 years, and the menstrual periods had been regular and painless every 30 days until the age of 42 years, in 1945. She had had 6 normal deliveries between the years 1923 and 1936. The seventh pregnancy (in 1939) was artificially interrupted and the last one (in 1945) ended in a chorioadenoma destruens, which occurred 9 years prior to this admission to the hospital.

On April 2, 1945, after 5 weeks' amenorrhea, the patient noted persistent bleeding and consulted a gynecologist. After the diagnosis of incomplete abortion was made, a curettage was performed. The tissue removed was found to be a hydatidiform mole. The bleeding then recurred and 6 months later a supravaginal hysterectomy was carried out at another hospital for removal of a uterine tumor, which on microscopic examination was found to be chorioadenoma destruens. Thereafter amenorrhea followed and no abnormalities were detected.

On October 3, 1954, she felt a sense of tension in the hypogastrium and on the morning of October 5 vaginal bleeding began. She complained of nothing else. Examination on admission, October 12, revealed her to be slightly pale but well nourished. Examination of the heart and lungs revealed nothing abnormal. The blood pressure was 130/60. The abdomen was slightly bloated, but no mass could be palpated.

Pelvic examination revealed normal external genitals. When a speculum was inserted into the vagina, blood-stained discharge was encountered. The portio appeared hypertrophic and an ulcer was seen on the posterior cervical lip. Upon bimanual examination the corpus uteri was found to be absent, but on anal examination a firm mass 7 to 8 centimeters in diameter was palpated which extended from the cervical stump and adhered to the anterior wall of the rectum. Otherwise, the pelvic organs appeared normal to palpation.

Laboratory data on admittance included red blood count 4 million; white blood count 7,800; hemoglobin level 95%; urinalysis normal; erythrocyte sedimentation rate 13.

The preoperative diagnosis was malignant tumor of the cervical stump. On October 12 a laparotomy was performed under spinal anesthesia. The corpus uteri and both tubes and ovaries were absent. An elastic tumor which seemed at first glance to be a hematoma arose from the cervical stump. The surface of the mass was covered with peritoneum. The tumor was carefully separated from the bladder wall and trachelectomy performed with little blood loss. The tumor was roughly spherical in shape, elastic and soft on the whole, rather sharply defined by a thin membrane, 8 by 7 by 5.5 centimeters in size and weighing 185 grams. Sectioning the mass showed the

growth projecting into the cervical canal, which was considerably elongated and rather thin. Dark red and white patches alternated, the red parts consisting largely of blood.

Microscopically, a large central area was seen, composed of hemorrhage and necrosis in which remnants of trophoblastic nuclei were still recognizable. Next to this area there was a zone in which round and polyhedral cells (resembling Langerhans cells) were arranged in large islands or bands bordered by a thin layer of multinucleated giant cells (resembling mostly syncytial cells). The surrounding muscle and connective tissue was invaded and conglomerations of embolic trophoblastic cells were found lying in the lumina of vessels in the vicinity of the tumor. The syncytial elements, for the greater part, were characterized by an even distribution of vacuoles, and the cells of Langerhans showed marked evidence of anaplasia. In the muscle tissue which was adjacent to the tumor elements, no clear fibrinoid layer was to be found. There were interspersed a few leukocytes (mainly lymphocytes). A villous pattern was nowhere observed.

Postoperative course: A Friedman test, made the next day, contained 100 rat units of chorionic gonadotropin per liter. On chest x-ray examination nothing unusual was noted. Nine days postoperatively the Friedman test was unchanged, the erythrocyte sedimentation rate was 44. On the fifteenth day the Friedman test was negative at 100 RbU. The patient was eating well and feeling much stronger and was discharged on the twenty-third day after the operation (November 4).

The patient was seen for follow-up examinations on November 8, December 1, and January 17. She was found to be entirely asymptomatic. The Friedman tests were always negative at routine levels. On February 24 she complained of hemoptysis (5 to 6 times daily) and slight dyspnea when at work since mid-February. Investigation of the sputum revealed no tubercle bacilli. Chest x-ray examination on this visit revealed numerous snowball-like shadows in both lungs, which were interpreted as metastases from the choriocarcinoma. Moreover, the Friedman test, became positive again, the titer being as high as 100 RbU. She was readmitted to our clinic on March 5, 1955, complaining of blood-stained sputum. At that time she looked slightly pale but well nourished. Pelvic examination revealed no palpable pathologic condition.

Chlortetracycline was administered in view of the virus theory of the origin of the disease. Despite this treatment by March 9 the lesions spread considerably over both lungs, and the chorionic gonadotrophin titer of urine increased to 50,000 RbU. Though the x-rays and Friedman tests of March 23, April 6, April 20, and May 4 remained almost the same, her condition gradually deteriorated. The chlortetracycline was stopped on April 11, after she had received 47.5 grams. As she wished to pass her last days at home, she was discharged.

On November 15 the shadows in both lungs showed remarkable increase. Hemoptysis continued, attended by slight pains in the chest and the lower part of the back.

On January 2, 1956, she suddenly expectorated about 100 cc of blood but thereafter neither hemoptysis nor bloody sputum was seen.

By May 7, she was in fairly good condition. She did not cough, though she had slight pains in the chest and waist, so we let her come to our clinic. Examination revealed no evidence of anemia. On percussion and auscultation both heart and lungs were revealed to be

normal. The abdomen and lower extremities were as usual. Pelvic examination revealed no palpable disease. Complete blood count and erythrocyte sedimentation rate were normal. Chest x-ray examination showed complete disappearance of the shadows, and the Friedman test was negative.

Follow-up examinations, x-rays, and Friedman tests between May 18, 1956, and November 15, 1959, (3 1/2 years after the disappearance of the shadows) revealed no abnormalities. She looked quite healthy and was able to do her work. She is considered completely cured.

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PLACENTAL NEOPLASMS OF UNCERTAIN BEHAVIOR

Trophoblastic Lesions of the Lungs Following Benign Hydatid Mole

SAVAGE MB

American Journal of Obstetrics and Gynecology 62(2): Aug 1951; 346-352

Extracted Summary

I wish to report a case with apparent gross trophoblastic lesions in the lungs which persisted over a long period of time and finally regressed and completely disappeared. The chest x-ray diagnosis and a diagnosis of benign mole of the uterus (following uterine curettement) were made at the same time. Repeated x-ray examinations of the chest showed an increase in number and size of the lung lesions for a period of months. The regression of the uterine trophoblastic growth was very prompt. Some evidence of a metastatic lesion in the lung was still present one year after the first diagnosis was made. A recent x-ray of the chest (two years after the first diagnosis) shows no evidence of any of the previous lesions in the lung. At the present time, this patient is clinically well and was delivered of a normal infant on January 9, 1951.

SELECTED CASE REPORT

The patient (H.B.M.) was 24 years old with 2 children. Her menstrual cycle had changed from 30 to 42 days. She was pregnant with an estimated due date of July 7. Her prenatal examination was negative other than apparently normal enlargement of the uterus, with dark blood-tinged mucus reported visible at the external os. The hemaglobin was 67%; blood type "A"; Wassermann test negative. Four days later free bleeding occurred and the patient was hospitalized for threatened abortion. Stilbestrol therapy increased to 25 milligrams daily. Flow and clots checked, and the patient was permitted to go home. On January 16 (4 days later), she was readmitted with cramplike pains and bleeding. Five hundred cc citrated blood were given and 24 hours later necrotic tissue was

evacuated under Pentothal Sodium anesthesia. Bleeding ceased, and the patient was discharged 24 hours later. Microscopic examination of the tissue was reported as "retained placenta tissue." Three weeks later (February 11, 1949) she was readmitted for severe postabortal bleeding with onset two days previously. The hemoglobin was 45% on the day of admission. Two days later, after 2,000 cc citrated blood, the hemoglobin was 71%. Bleeding continued and on February 20, with the hemoglobin at 58%, another 500 cc of blood was given and then a diagnostic curettage was performed. Gross material removed by curette was small in amount, with 3 cc blood clots and definite visible vesicles, enough to diagnose hydatid mole grossly. Microscopic examination revealed sections of

irregular masses of Langerhans' cells closely packed together with large syncytial elements here and there. Langerhans' cells have rather clear cytoplasm and hyperchromatic nuclei, which vary in size. The syncytial cells also have hyperchromatic nuclei. Sections show masses of decidual cells with degenerative changes and a few small villi with edematous stroma are present.

Benign mole was finally diagnosed after examination of the section by several pathologists. The first opinion was that areas in the section were suggestive of chorionepithelioma, and the possibility of it was strongly considered. X-ray examination at this time (February 23, 1949) revealed a small nodular lesion 6 millimeters in diameter below the second anterior rib in the left lung field. The report further stated, "One cannot be sure it is not a small nodular metastasis."

The Friedman test at this time (February 24, 1949) was strongly positive. A second curettement, within a week, did not reveal other than chronic endometritis and decidua of pregnancy. The patient was given another transfusion of 500 cc of blood. After 15 days of hospital observation, uterine bleeding stopped and the patient was discharged with hemoglobin of 80%. During the hospital observation, total hysterectomy was considered but was not done on the advice of Dr. Emil Novak of Baltimore, following a study of the sections. His report stated, "A number of typical hydatidiforms are seen showing marked proliferation of the trophoblasts. There are also large fields of decidual cells infiltrated with trophoblasts, especially syncytium. This makes the section look somewhat more wicked than it actually is, as such infiltration of the decidua is seen with perfectly benign moles and even in normal pregnancy. Diagnosis: Benign proliferative hydatidiform mole." Observation and repeated biological tests were also advised by Dr. Novak.

One week later (April 1), a strongly positive Friedman test was reported. One week later (April 6), pelvic examination showed involution of the uterus and no evidence of vaginal metastases. Three weeks later (April 29), the Friedman test was strongly positive.

Two weeks later (May 13) the Friedman test in dilution 1:2 was positive. Some dark vaginal bleeding occurred at this time. She was readmitted to the hospital 3 days later (May 16). The hemoglobin was 83%; diagnostic curette-

ment was negative. There was slight edema of the stroma and otherwise normal endometrium in the early secretory phase. On May 19, 3 days later, an x-ray compared with the first report was as follows: "The previous very small nodular shadow in the left upper lung field has increased considerably in size during the interval. It now measures about 1.5 centimeters in diameter. In addition, other nodular lesions have appeared, both in the left upper lobe and in the right upper lung field."

Dr. Novak again reviewed the sections after this clinical development, and he wrote me an opinion on further treatment: "I doubt if your patient would be exposed to any undue hazard by omitting x-ray therapy and just watching her, but again I offer this advice in a rather hesitant fashion. I shall be interested in any further development in this interesting case."

On June 22, 1949, approximately one month later, 1:4 dilution Friedman was negative and clinically a menstrual flow apparently occurred on August 3, 1949. Six weeks later, x-ray examination of the chest showed a marked involution or regression of the lung lesions.

Seventeen days later (August 20, 1949) 1:2 dilution Friedman test was negative.

Three months later (November 17, 1949) a full-strength Friedman test was negative. On the day following, x-ray examination revealed the following: "There has been a marked regression of the nodular lesion in the lungs since the last examination, with only one small one remaining in the left upper lung field at this time."

During the clinical observation, the patient gradually increased in weight. The hemoglobin level remained high. At one time, midway of this observation, she complained of difficult breathing and shortness of breath. Her general health was excellent during most of the observation period.

During the early part of 1950 her periods were irregular and a frog test for pregnancy was reported positive, and later a negative report was obtained. While under observation for this irregularity, a diagnosis of pregnancy was made and her prenatal period was uneventful.

She delivered a male child on January 9, 1951. X-ray examination now shows no evidence of any gross lesions of the lungs.

Chorioadenoma Destruens of Uterus

Spontaneous Regression of Pulmonary and Pelvic Metastases: A Case Report

HEARIN WC; MOORE JC; EASLEY CM

Journal of the South Carolina Medical Association 56: June 1960; 220-222

Extracted Summary

This case represents a chorioadenoma destruens of the uterus and pelvis following hydatidiform mole. A period of 3 months elapsed from the time of the evacuation of the mole from the uterus until the time of hysterectomy and bilateral salpingo-oophorectomy. Preoperative febrile course is impressive. This case further demonstrated by films the metastatic spread of this lesion to the

lungs with spontaneous regression. It is noted that the primary treatment here was surgery with no chemical or x-ray therapy to the pelvis or to the pulmonary lesions. This patient has had 18 months follow-up, has gained weight and returned to work and is apparently free of any disease at the present time.

SELECTED CASE REPORT

A married, white female, age 28, was first seen in December 1957 complaining of pain in the left lower side with onset early that same day. The patient stated that she had been married 8 years with no pregnancies. Her last menstrual period was in October and at the time of admission she was about 2 weeks over her regular period. She gave a history of usual regular periods and she had spotted off and on for two weeks prior to admission. She had rather bright bleeding the day of admission.

On admission the cervix was closed, there was a small amount of bleeding from the cervix, the uterus was anterior and seemed enlarged to the size of a 5 or 6 weeks pregnancy. The cul-de-sac was normal to palpation, there was no pain with cervical motion. The left adnexa were somewhat tender but no masses were definitely palpated. It was thought at this time that the patient had a uterine pregnancy with threatened abortion, and the possibility of a left tubal pregnancy. Some bleeding continued for the next 2 or 3 days but the pain was less. The frog test was positive for pregnancy. She was discharged on the 6th of December after 3 days in the hospital on ascorbic acid 100 milligrams twice a day and diethylstilbestrol 5 milligrams twice a day. On the 6th of January 1958 a survey film of the abdomen for fetal parts showed a soft tissue mass arising out of the pelvis, somewhat asymmetrical and lobulated. The diameter of the mass measured 20 centimeters and the vertical diameter roughly 20 centimeters. No definite fetal parts could be demonstrated on this film.

The patient was readmitted to the hospital on January 14, 1958, because of continued bleeding, and because of the rapid growth a hydatidiform mole was suspected. On this admission her hemoglobin was 10 gm/100 ml. (69%). The cervix was 1 centimeter dilated and moderate bleeding continued. On this admission several attempts were made with a pit drip to empty the uterus without success. On January 15, 1958, evacuation of the uterus was carried out under anesthesia and the gross findings at this time at surgery were: A uterus the size of a 5 month's gestation, the cervix dilated 1 centimeter. The cervix was dilated without difficulty with Hegar dilators, the endometrial cavity explored with placental forceps with removal of a large amount of grape-like material. This had the gross appearance of a hydatidiform mole. After removal with placental forceps the uterus was gently curetted with a large blunt curette. There was considerable bleeding present and a 2 inch uterine pack was inserted. The patient received 1,000 milliliters of blood.

The pathological report on this was hydatidiform mole-Hertig grade III. At that time no evidence of malignancy could be demonstrated. The patient was discharged on the 19th of January after 5 days of hospitalization. She

was seen in the office on the 2nd of February 1958, 2 weeks postoperative. There was no bleeding at this time; the uterus seemed normal size but retroverted. The right ovary was of normal size but the left ovary was anterior to the uterus and about 3 times normal.

On March 3rd the frog test was still positive for pregnancy.

On March 21, 1958, the frog test was still positive and repetition of curettage was planned. The patient was readmitted to the hospital on March 23, 1958, for operation because of the positive frog test. At this time she still had had no menses and no unusual leukorrhea.

On this admission the uterus was anterior and felt slightly enlarged but firm. The left ovary was still thought to be enlarged to twice its normal size. At operation on the 22nd of March 1958, the uterus was slightly enlarged, and sounded to the depth of 4 inches; there was no gross molar tissue present but there was a small amount of endometrial tissue. Pathological report at this time was "persistent trophoblastic tissue following hydatidiform mole." The patient had a fever up to 103°F. on the 2nd postoperative days; this returned to normal after 24 hours.

She was readmitted to the hospital April 9, 1958, with the history of having high fever for several days at home and being treated with antibiotics by her family physician. She complained of chills and fever and of low backache and pain in the left lower quadrant and down the inner aspect of her left leg. At that time there was no bleeding, the cervix was clean, the vaginal vault was clean, the uterus could not be outlined but it was thought to be retroverted. There was a definite tender mass in the left adnexa which was stony hard and estimated to be 3 x 3 centimeters. The patient was placed on an antibiotic, (erythromycin 500 milligrams q.i.d.). Temperature on admission was 102°F. and it stayed between 102° and 103° for 4 days following admission. On the 12th of April an x-ray examination was made for the first time. It was the conclusion at that time there was a great deal of abnormal density in the lungs highly indicative of metastatic disease and the radiologist considered chorioepithelioma. Hemoglobin on this admission was 9.9 grams. The patient had no cough and no respiratory symptoms. After transfusions the patient was taken to surgery on the 12th of April, total hysterectomy and bilateral salpingo-oophorectomy were done. The uterus showed a large bluish area of probable tumor on the posterior wall in the region of the left uterine vessels. There was also separate from the uterus a large nodular mass extensive in the region of the bladder and extending out to the pelvic wall. The ovaries and tubes were grossly normal. At surgery it was impossible to remove all the implants under the bladder and on the lateral pelvic wall. The patient's temperature returned to

normal the day following surgery and remained normal for the rest of the hospital stay.

It was the pathologist's impression that there was a malignant hydatidiform mole (chorioadenoma destruens). On April 29, a repeat frog test was obtained and it was still positive.

On the 12th of June 1958, the patient's weight was 109 pounds, her hemoglobin was 13 grams, she had no pulmonary symptoms, her lungs were clear to auscultation, the left adnexal lesion was smaller at this visit and there was no pain but the mass could still be detected at this time. Her last surgery had been 2 1/2 months previously.

On the 20th of June her frog test was still positive.

On her return visit on the 2nd of August 1958, her weight was 115 pounds, her hemoglobin was 13.8 grams but she had noticed some pain in the lower left side. On pelvic examination no pathology could be demonstrated by

palpation. Her vaginal vault was clean. A chest film on the 16th of August showed a very ill defined nodule projected at the level of the left 3rd anterior rib. Tiny fibrotic scars were seen in the lung but the multiple nodular lesions seen in April were gone for the large part. It was the radiologist's impression that the chest showed amazing improvement in view of the past history.

The patient was feeling well and had returned to work. In April 1959, the chest continued to be essentially negative, there was no evidence of any infiltration in the lung, nor any metastatic nodules. All the nodules previously present had completely disappeared without scarring and even the small ill-defined nodule in the left lung present on August 16, 1958, had completely disappeared. The lungs were clear and negative. The heart was normal, as was the pleura. In April of 1959, the two male frog tests were negative and a female frog was also negative for the first time.

Spontaneous Regression of Pulmonary Metastases Following Hydatidiform Mole

BENETT MS

British Journal of Clinical Practice 22(7): July 1968; 305-307

Extracted Summary

A case is reported where pulmonary metastases were found in a case of benign hydatidiform mole. The metastases regressed spontaneously without any treatment. It is suggested that chest X-rays and estimations of chorionic gonadotrophins in the urine should be carried out at regular intervals.

It is well known that pulmonary metastases can occur in cases of benign hydatidiform moles, but it is not always accepted that they can regress without any treatment. This case is reported as it all happened some years ago and the patient is still alive and well.

SELECTED CASE REPORT

The patient, aged 24, had a normal delivery in November 1960. She was admitted in December 1961, with vaginal bleeding and amenorrhoea of 18 weeks. Examination revealed a 26-weeks uterus. No foetal movements had been felt but with a strong family history of twins, treatment was conservative at first. However, a few days later her blood pressure, which had been normal, rose to 190/110. There was also albuminuria and oedema. Hydatidiform mole was strongly suspected and was confirmed by abdominal x-ray. Abdominal hysterotomy was carried out and the mole evacuated digitally. Both ovaries were enlarged and cystic. She recovered well and was sent home three weeks later. A chest x-ray taken when she was first seen was normal. The histological report showed a benign mole.

Repeated Hogben tests were done at intervals. The first one was carried out 6 weeks after evacuation and, though positive, it was negative in dilution. She was seen again in March 1962, when the Hogben was negative.

She complained then of vaginal bleeding and was therefore admitted for curettage. The pelvic organs were normal. Curettings were sent for histology and showed decidual tissue with no evidence of neoplasm.

A chest x-ray done at this stage (10 weeks after evacuation) showed: 'Several rounded shadows in the right lung, suspicious of secondary deposits'. The chest x-rays were repeated and showed the same appearances.

In view of her age, the negative urine tests and benign curettings, it was decided to follow her up. All urine tests remained negative, the last one being done more than two years after evacuation of the mole. Her periods became regular. The chest x-rays showed gradual fading of the lung shadows until in July 1962, that is six months after evacuation, when they were reported to be normal. They remain thus, to this day.

I am glad to add that in April 1967, she had a normal delivery of a live infant after a normal pregnancy and labor. A chest x-ray was normal.

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Two Cases of Deciduoma Malignum

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Rückbildung von Ovarialtumoren nach Blasenmole

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1910; 180-185

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Hydatiform Mole with Metastases

FREEDMAN JR

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JACOBSON FJ; ENZER N

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Chorioadenoma Destruens

HSU CT; HUANG LC; CHEN TY

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Spontaneous Regression of Theca Lutein Cysts in
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BELFORT P; PEREIRA LTB; TOURINH OEK

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Spontaneous Regression of Serum HCG in 18 Patients
Following Evacuation of Uncomplicated Androgenic
Moles (Spontan Serum-HCG-Regression hos 18
Patienter Efter Evacuatio af Ukompliceret
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VEJERSLEV LO; ARENDS J; LARSEN SO

Ugeskrift for Laeger 150(35): Aug 29 1988; 2081-2083

MALIGNANT NEOPLASMS OF THE OVARIES, OTHER UTERINE ADNEXA,
AND OTHER FEMALE GENITAL ORGANS

The Treatment of Malignant Peritonitis of Ovarian Origin

CODMAN EA

Annals of Surgery 68: 1918; 338-346

Extracted Summary

Five cases are reported in which the patients are alive after periods of sixteen, eight, three, two and one year. In summary, the author discusses some basic principles of the malignant nature of cancer in general: The most malignant characteristics of cancer are its insistence on growth, its absorbable poison which produces cachexia, and its tendency to metastasize. Beyond these three mysterious characteristics it has only mechanical terrors.

SELECTED CASE REPORTS

Case 1: (E. S. Records, vol. 372, p 76) A woman of thirty-two was operated on by my chief, Dr. F. B. Harrington, at the Massachusetts General Hospital on June 30, 1900. Under the diagnosis of pelvic abscess an incision was made in the vagina, some papilocystic material was curetted out and drainage established. Nine days later, at Doctor Harrington's suggestion, I opened the abdomen and found a large inoperable pelvic mass, and diffuse wart-like metastases scattered over the whole peritoneum.

From year to year this patient returned to the hospital seeking radical operation and was considered hopeless by the various surgeons to whose services she was admitted. The vaginal sinus persisted and discharged pus and occasionally lumps of necrotic malignant tissue. Although the tumor grew, her general condition improved.

Finally, on December 22, 1910, ten years after the original operation, I was persuaded to attempt another. To my surprise, on opening the abdomen, I found the peritoneum perfectly free from metastases and the growth limited to the huge pelvic tumor which was adherent to the neighboring structures. After a sort of nightmare operation, I succeeded in removing the entire tumor with all the pelvic organs, including the rectum. An artificial anus was made. After a tedious convalescence the patient recovered, and when last seen on August 14, 1916, was fat

and well—six years after the second operation and sixteen years after the first.

All pathologic specimens showed typical papillary cystadenoma. The large tumor was more solid than cystic.

Case 2: (E. S. Records, vol. 664, p 327) A negress, aged twenty-three, was operated on by me at the Massachusetts General Hospital on December 9, 1909. An inoperable pelvic tumor and numerous peritoneal metastases were found. A specimen was taken from the peritoneum and reported to be adenocarcinoma. No attempt was made to remove the tumor. She made a good recovery, and in June, 1916, her physician reported that she was well and had since married. A small pelvic tumor still existed, six and one-half years after the first operation.

On May 27, 1918, her physician, Dr. C. P. McClendon, of New Rochelle, N. Y., wrote: "I have just returned home and found your letter making inquiry about R. M. I am happy to state that she is in very good health. And the trouble of which she complained when I last wrote to you seems to have subsided. She seems to be in excellent health. She is sometimes troubled with periods coming on twice a month, but seldom complains of the sharp pains she used to. She is not willing to be operated and so I just look her over at odd times."

Papillary Cystadenocarcinoma of Both Ovaries

Report of a Case with Apparent Cure Eight Years After Operation

GAUDRAULT GL

New England Journal of Medicine 239(2): Jul 8 1948; 56-57

Extracted Summary

Papillary cystadenocarcinoma of the ovary is a malignant epithelial growth. The prognosis is very poor. Early diagnosis is essential, and treatment should be as radical as circumstances permit, followed by x-ray therapy. A case of papillary cystadenocarcinomas of the ovary, diagnosed approximately one year after the onset of symptoms, is reported. The patient had actual surgical, but not radical, treatment four years after the onset of symptoms and without postoperative x-ray therapy. Yet after more than eight years she feels well, works every day, and is apparently cured.

SELECTED CASE REPORT

A 26-year-old housewife, A. S., entered the Margaret Pillsbury General Hospital on November 7, 1939, complaining of discomfort in the lower abdomen, distention, menstrual irregularity and loss of weight, as well as pain in the lumbar region and legs.

The past and family histories were irrelevant. The patient was married, and her husband was well. She had had no pregnancies. For 1 year prior to admission she had complained of some discomfort in the lower abdomen, back and legs. During the last 2 months before admission the discomfort increased markedly, and since other distressing symptoms appeared, admission was advised.

Physical examination showed the patient to be pale and cachectic. The abdomen was distended and tender, and on percussion the presence of fluid was detected. No masses were felt. Pelvic examination revealed a small uterus in normal position, not movable, and a tender, diffuse mass in the pelvis. A tentative diagnosis of tuberculous peritonitis or adenocarcinoma was made. Examinations of the blood were within normal limits. The urine showed a trace of albumin, sugar and acetone.

On November 9 a laparotomy was performed, and about 2 liters of straw-colored fluid drained from the abdominal cavity. Exploration of the pelvic cavity revealed a

small uterus in good position and large papillary growths of both ovaries, with extensive papillary peritoneal implants in the entire pelvic cavity.

Three other physicians were called in for advice, and it was decided that the disease was too extensive and advanced for surgery to be of any benefit. A biopsy was taken, and the abdomen was closed.

The pathologist reported metastases of a papillary cystadenocarcinoma of the ovary. The patient was discharged on November 22, still complaining of some abdominal discomfort.

On December 2 the patient was seen at home. She complained of severe abdominal distress and distention; she had had no bowel evacuation for 2 days and had expelled very little flatus. Intestinal obstruction was feared, and she was admitted to the New Hampshire Memorial Hospital on December 3. From that time to the day she was operated on for the second time she was treated as a hopeless case. Consultants advised taps and morphine and believed that x-ray therapy would be of no help. The patient was treated accordingly until about June 1, 1942. She was tapped 63 times and from 5,000 to 10,000 cc of fluid removed every 2 or 3 weeks. She was kept comfortable with morphine, the dosage being increased to 30 milligrams every 3 hours.

The patient at that time begged to be operated on again, no matter what the outcome might be. The only intention was to explore and insert a mushroom catheter to relieve her of further taps. On June 1 she was operated on at her request. Her weight was about 80 pounds. The

abdomen was opened, and there were no peritoneal implants. A fair amount of straw-colored fluid was found. The appearance of the pelvis was altogether different. All the papillary growths were encapsulated in one large mass to the left and two other smaller ones to the right. All were adherent to the adjacent organs, rectum, uterus and bladder. The growths were dissected and removed with great difficulty except for a small portion about the size of a silver dollar in the right fossa. Some of the contents were spilled in the abdominal cavity and removed with care. The uterus was not removed because of the difficult and long operation. One mushroom drain was left in place, and the abdomen was closed in the usual way.

The pathological diagnosis was papillary cystadenocarcinoma of both ovaries, with extension to the peritoneum.

The postoperative recovery was fair and rather stormy because the patient was deprived of morphine. She was given two 500 cc transfusions. The drain was removed on June 27. The abdomen was not healed before September 12, and until that time the temperature went as high as 102°F. The patient was then transferred to the medical service. She improved, gradually gained weight and was discharged November 22, after having spent 1,086 days in the hospital.

The patient has been checked regularly every 6 months. She had one scant menstrual period and occasional hot flashes after the second operation. She was checked for the last time 2 months ago, with no apparent recurrence. Her weight is now 140 pounds; she feels well and works every day.

Studies in Clinical and Biological Evolution of Adenocarcinoma of the Ovary

TAYLOR HC JR

Journal of Obstetrics and Gynaecology of the British Empire 66: 1959; 827-842

Extracted Summary

The experience of the last seven years, in our work with the adenocarcinoma of the ovary, has taught us a number of things. Perhaps it would be better to say these have been reemphasized for essentially everything we have reported has been chiefly the application to a special situation of what was already known.

The collaborative work of the basic science investigators with clinicians is at least one of the ways by which the work of laboratory and clinic may be brought into closer relationship.

The importance of adenocarcinoma of the ovary has been stressed. Not only has work upon this been less than frequency deserved, but this tumour offers for the worker on cancer in general the opportunities of an observable histogenesis, of the existence of an "ascites phase" where proliferating cells may be observed in the natural culture media of the peritoneal fluid, of the phenomenon of spontaneous regression of a tumour that seems to be transitional between the benign and the malignant and, finally, an opportunity, seemingly unequalled among human tumours, of studying the essential phenomenon of neoplasia: differentiation.

The importance of this process of differentiation and de-differentiation or of varying degrees of malignancy has been re-emphasized.

Finally, report is made of early efforts to find such processes that could be so correlated. Differences between the benign and the malignant were found in respect to tissue respiration, rate of P³² incorporation in RNA and in the variability in amounts of DNA. The author has undertaken a review of the literature after observing 5 cases of spontaneous regression of tumours of the ovary and has found no less than 36 clearly proven or probable examples of spontaneous regression.

No doubt there have been a number of similar incidences reported since that time for the occurrence appears not to be very unusual. Study of the histology of the cases immediately available to us, and review of the reports and photomicrographs in the literature, failed, however, to reveal a single instance of regressing tumors which could be described as "anaplastic" or even "fully developed" carcinoma in the histological sense.

Papillary Carcinoma of the Ovary

Report of a Case with Prolonged Dormancy and Spontaneous Regression of Metastases

GAUDRAULT GL

New England Journal of Medicine 264: Feb 23 1961; 398

Extracted Summary

A woman with extensive ovarian papillary cystadenocarcinoma in the pelvis underwent bilateral ovariectomy two and a half years after the diagnosis had been established. A proved, persistent, untreated metastasis was resected seven years and nine months later. She was well ten years thereafter and twenty years and eight months from the time of original diagnosis.

SELECTED CASE REPORT

On November 3, 1939, Mrs. A.S., then 26 years old, underwent exploratory laparotomy. About 2 liters of fluid was removed from the abdominal cavity. There were large papillary growths, 8 by 8 centimeters, of both ovaries and extensive papillary peritoneal implants in the entire pelvic area and involving the omentum, but the upper abdominal cavity appeared free. The situation was considered hopeless, and some tissue excised for biopsy from the mass in the right ovary. The pathologist reported the tissue to consist of papillary cystadenocarcinoma of the ovary.

Consultants advised against x-ray therapy. The patient was admitted to another hospital on December 3, 1939, and treated as a hopeless case. Between then and June 1942, abdominal paracentesis was performed 63 times. She was kept comfortable with morphine, the dose reaching 30 milligrams every 3 hours. Her weight dropped from 53.5 kilograms (118 pounds) to 36.3 kilograms (80 pounds).

At the patient's insistence her abdomen was opened on June 1, 1942. There were no peritoneal implants. There was an encapsulated mass of tumor on the left measuring 10 by 10 centimeters and 2 encapsulated masses on the right measuring 8 by 8 centimeters and 6 by 6 centimeters, all adherent to adjacent structures. With great difficulty, these masses were removed except for a 3 centimeter area far out in the right broad ligament. To avoid prolonging the operation, a hysterectomy was not performed. The microscopical diagnosis was papillary

cystadenocarcinoma of both ovaries, with extension to the peritoneum. Recovery from surgery and addiction to morphine was slow. She was discharged from the hospital on November 22, 1942. X-ray therapy was not given. Thereafter, she was examined at 6-month intervals and had no discoverable disease. There was no further ascites. Her health was excellent, and in the spring of 1948, she weighed 63.5 kilograms (140 pounds). Metastatic survey by x-ray films gave no evidence of dissemination.

On March 12, 1950, she was admitted to the Exeter Hospital because of symptoms suggesting appendicitis. She had had slight nausea and lack of appetite for 2 weeks and discomfort in the right lower quadrant, with tenderness at McBurney's point. Examinations of the blood and urine were within normal limits. Having in mind the past history and the portion of the original tumor left in the right broad ligament, I considered it wise to explore.

On March 14, 1950, an operation was performed. The pelvis and the whole abdomen were free from adhesions and bowel embarrassments. A normal-appearing appendix was removed. In the right broad ligament was a firm mass, 3 by 1.5 by 1.5 centimeters, which was removed with the uterus. The microscopical diagnosis was atrophied appendix, chronic cervicitis and papillary cystadenocarcinoma. She recovered well. She has been followed carefully and has remained well. On February 13, 1960 [21 years after biopsy], she weighed 68.9 kilograms (152 pounds).

Spontaneous Regression in Gynecologic Neoplasia

JULIAN CG

National Cancer Institute Monographs 44: 1976; 27-30

Extracted Summary

As I have tried to tabulate and evaluate the cases of spontaneous regression of gynecologic malignancy, several facts stand out: (1) They were infrequent. (2) The tumors most commonly undergoing spontaneous regression were the germinal epithelial tumors of the ovary; there was not one case of spontaneous regression of any other variety of ovarian neoplasm. (3) There was not one legitimate case of spontaneous regression of an invasive epidermoid carcinoma of the vulva, vagina, or uterus.

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Droite Pratiquée à L'âge de 8 Ans

AIMES A; GUIBERT HL; GALVAING

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FLETCHER HN

British Medical Journal 2: Oct 8 1949; 794

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Years After Removal of Primary Growth

HUTCHESON JB

Archives of Pathology 54: 1952; 314-318

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SOMMERS SC; GATES O; GOODOF II

Obstetrics and Gynecology 6(4): Oct 1955; 395-398

Metastatic Carcinoma of the Ovary: Report of a Case
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BARE WW; MCCLOSKEY JF

American Geriatric Society. Journal 11: Jan 1963; 90-94

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Inflammation, Fever or Immunotherapy (Bacterial
Toxins) on Ovarian and Uterine Cancer

NAUTS HC

Cancer Research Institute Monograph 17: 1977; 122 pgs

Neoplasms of Male Genital Organs

Teratoma of Testis: Spontaneous Disappearance of Lung Metastases

SCHOFIELD JE

British Medical Journal 1: 1947; 411

Extracted Summary

A case report is presented which showed evidence of the spontaneous disappearance of lung metastases from a teratoma of the testes before the primary growth was removed. It should also be noted that deep x-ray therapy was not given. In fact, there was no treatment of any description.

SELECTED CASE REPORT

In September 1941, a youth aged 16 was referred to me by Dr. A. Gibson with a swelling of the right testicle. It was the size of a Jaffa orange, heavy, painless, but slightly tender. The skin was thickened. There was an indefinite swelling in the abdomen. The Wassermann reaction was negative. The radiologist's report on an x-ray examination of the chest read as follows: "Multiple, circular, sharply defined opacities in the lungs. They are of varying sizes, and are largest and most numerous in the lower zones. Intermediate sizes are found in the mid-zones. There is no surrounding lung reaction to any of these opacities, the appearance of which is typical of secondary malignant deposits. There is no evidence of tuberculosis. The mediastinal glands are not enlarged." A diagnosis of malignant testicular tumour with abdominal and lung metastases was made, and, in view of the metastases, the youth's parents were told that operation was not advised and that his expectation of life was only a few months.

In July 1945, almost four years later, he was referred to me again by Dr. Gibson, who wished to know why the patient was still alive. Indeed, I was extremely surprised to see him myself. Insofar as I could remember, his general appearance had markedly changed. Dr. Gibson stated that during the last four years the testicular tumour had varied considerably in size from that of an egg to a Jaffa orange. The tumour of the right testis was softer, was slightly fluctuant, and was a little larger than in 1941. An indefinite abdominal mass could still be felt. The radiologist reported: "The only abnormality seen is a small opacity in the left lower zone. In view of the previous appearance this shadow should be presumed to be a metastasis. The complete disappearance of all the other metastases is remarkable."

It was now considered justifiable to advise surgical treatment. A right orchidectomy was performed, the cord

being attached to the internal abdominal ring. Under the anaesthetic a definite mass of abdominal glands was palpated. Macroscopically the testicle had the appearance of a breaking-down tumour, yellowish in colour, with many cysts and cartilaginous nodules. The report of the pathologist on a microscopical section of the tumour read: "The tumour appears to be a teratoma of the testicle, surrounded by a fairly dense fibrous capsule. The structure includes various tissues. The most prominent being cyst-like spaces of various sizes, lined with columnar or flattened epithelium. Nodules of cartilage are also present, embedded in the stroma, which is composed of loose fibrous tissue containing fibres of smooth and striped muscle. There are some masses of undifferentiated cells, suggestive of a malignant element, which is common in this type of tumour. It is considered, moreover, that all such testicular teratomata are potentially malignant, and should be treated accordingly."

The operation and convalescence passed off without incident, after which the patient's general condition improved, with increase of appetite and weight. The last report of the radiologist on a recent skiagram of the chest states that there is "no evidence of abnormality." Despite frequent examination of the abdomen it is difficult to say whether the abdominal mass has completely disappeared.

The unorthodox course of the disease led me to inquire carefully into the patient's habits, occupation, diet, etc., after I first saw him in 1941 and pronounced the case inoperable. It appears that he was employed in a bakery until February 1942, after which he obtained work in an aeroplane factory for twelve months. Here he breathed an atmosphere containing duralumin dust. From January 1943, until July 1945, he did casual work on a farm. He had no peculiar habits or liking for any particular article of diet.

Spontaneous Regression of Pulmonary Metastases Arising from a Testicular Tumor

MALAMENT M; JOHNSTON WW
Journal of Urology 73(1): Jan 1955; 117-123

Extracted Summary

A case of spontaneous regression of pulmonary metastases, temporary in nature, arising from a teratocarcinoma of the testis with a co-existing chorioepithelioma, is reported. The literature has revealed four different theories regarding the possible etiology of spontaneous remission. Whether the antibody, hormonal, self-destructive, or maturation process or a combination of these can produce these regressive changes has not yet been determined. Similar cases have probably been seen but not reported. A comprehensive analysis of these cases might lead to better evaluation and a possible means of control of these highly malignant tumors.

A Primary Malignant Testicular Tumour with Unusual Metastases

DUARI M
British Journal of Clinical Practice 21(4): Apr 1967; 195-200

Extracted Summary

A case of primary testicular malignant tumour with metastases of unusual distribution and behaviour is presented. Spontaneous retrogression of cervical and pulmonary metastases has occurred.

This case has several interesting features. First, the presentation of the metastatic lymph nodes high up in the right suboccipital region and in the left supraclavicular fossa about seven months after a simple orchidectomy and abdominal irradiation of the relevant lymphatic fields is unusual.

Second, in spite of the dispersal of tumour cells in the process of dissection and excision of the suboccipital node, the wound healed per primum and the residual disease here, as well as in the left supraclavicular fossa, disappeared spontaneously without any further treatment.

Third, the pulmonary metastases which were so clearly evident on the chest x-ray film of March 28, 1962, were found to disappear spontaneously within the next few months and were no longer evident on films taken on September 10, 1963, and November 22, 1965.

Fourth, a small intestinal metastasis presenting clinically as acute intestinal obstruction is very rare.

Spontaneous arrest or retrogression of some cancers is now generally accepted, though the factors responsible are largely unknown. It seems certain that the cervical and pulmonary metastases have disappeared in the present case.

Spontaneous Regression of Metastatic Testicular Cancer

BIRKHEAD BM; SCOTT RM
Cancer 32(1): Jul 1973; 125-129

Extracted Summary

Clinical data on a patient who underwent spontaneous regression of pulmonary metastases from a testicular cancer are presented. He continues to be free of cancer 12 years later. A review of the literature disclosed nine similar cases, which are discussed in some detail. Spontaneous regression of metastatic testicular cancer is so rare that its possibility should never be a factor in the consideration of possible treatment choices in any specific case. The authors have no proposition to offer

regarding the mechanism responsible for the spontaneous regression described herein. It is hoped, however, that the collection of these 10 cases and their categorization as true, spontaneous regressions may be of some general interest to those researchers currently engaged in the study of the immune response which must surely play a major role in such miraculous recoveries from disseminated cancer.

Spontaneous Regression of Metastases from Testicular Tumors: A Report of Six Cases from One Center

FRANKLIN CIV

Clinical Radiology 28(5): 1977; 499-502

Extracted Summary

In a review of the cases of testicular tumours treated at the Christie Hospital between 1961 and 1974 there are six cases with spontaneous regression of metastases, which are now reported. In this period, 827 cases of testicular tumour have been treated, giving an incidence of spontaneous regression of 0.72%, which is considerably higher than previously reported. One of these cases appears to be pure seminoma; spontaneous regression of metastases from seminoma has not been reported previously.

SELECTED CASE REPORT

Case 1: B. W., 34, presented with a short history of a swollen left testis prior to orchidectomy in August 1963. The tumour was reported as malignant teratoma intermediate B (MTIB) by the Testicular Tumour Panel and Registry (TTPR). As there was no clinical evidence of metastatic disease he received prophylactic postoperative abdominal irradiation. In March 1964, he complained of low back pain radiating to his left groin, but no disease was palpable on examination and x-rays of

lumbar spine and pelvis were normal; however a chest x-ray showed multiple pulmonary metastases. In view of the unfavourable histology of the primary tumour no radiotherapy was given for these metastases. By August 1965, some had disappeared and others were smaller; in April 1966 there had been further resolution and by November 1971 the residual shadows had become finely calcified. In December 1975, he was well and no further change was noted on his chest x-ray.

An Unusual Regression of Pulmonary Metastases From Embryonal Carcinoma of the Testis

HASSENSTEIN EOM

British Journal of Radiology 50: 1977; 668

Extracted Summary

We have treated a patient with an unusual regression of pulmonary metastases from a testicular tumour and because of the rarity of this phenomenon we wish to report and discuss this case briefly.

The author postulates that by removal of the primary tumour and by effective therapy of metastases in the right lung, the immune system had been stimulated and was thus able to destroy the residual metastases in the left lung.

Spontaneous Regression of Metastatic Testicular Carcinoma in a Patient with Bilateral Sequential Testicular Tumor

MUEH JR; GRECO CM; GREEN MR
Cancer 45(11): Jun 1 1980; 2908-2912

Extracted Summary

Spontaneous regression of metastatic neoplasia is rare. A review of previously reported spontaneous regressions of testicular cancer indicates that in no case has such a patient had a prior, concurrent, or subsequent contralateral tumor. The case presented is unusual because it is the first instance of bilateral sequential testicular cancer in which spontaneous regression of metastases from one of the tumors has been noted. Together with a previous report of a spontaneous regression of testicular cancer which occurred only after a second orchiectomy, the present case suggests the possibility of hormonal modulation of tumor growth.

Spontaneous Regression of Metastatic Embryonal Testicular Carcinoma: Twenty-Two Year Follow-Up

HUSSEINI S; KRAUSS DJ; RULLIS I
Journal of Urology 136(1): Jul 1986; 119-120

Extracted Summary

A case of spontaneous regression of an untreated metastatic embryonal cell carcinoma with a 22-year follow-up is reported. The patient, a 36-year-old white man presented to his physician in July 1964 with a 2-week history of swelling and pain in the left testicle. In August he underwent a left radical orchiectomy. The pathological diagnosis was embryonal carcinoma with both capsular and vascular invasion. The lymphangiogram showed abnormal nodes with obstruction in the lymphatic vessels of the left side at L3 and L4 levels. IVP, chest and bone x-rays were normal. A left scalene node was excised for pathological diagnosis which revealed metastatic embryonal carcinoma. The original slides from the orchiectomy were discarded by the hospital. The urologists did not feel an operation was indicated and gave a grave prognosis. In September, because the patient expected radiotherapy and because of his emotional state, he was given a homeopathic 2,500 rad ⁶⁰Co treatment to the supraclavicular area over five days. The grave prognosis was withheld from the patient.

At a clinic visit in 1966, an IVP revealed minimal displacement of the left mid ureter. Visits since then have been normal except for chronic otitis media and treatment for a hot thyroid nodule 11 years ago. At his last visit in January 1986, he was well with no signs of recurrence. (Permission to reproduce case report denied by author.)

Spontaneous Healing of Kaposi's Angiosarcoma of the Penis

CASADO M; JIMENEZ F; BORBUJO J; ALMAGRO M
Journal of Urology 139(6): Jun 1988; 1313-1315

Extracted Summary

We report a case of Kaposi's angiosarcoma of the penis. Few cases have been reported of the initial and exclusive involvement of Kaposi's angiosarcoma of the glans penis and prepuce. Our case is unique because of the number of lesions and the spontaneous remission.

SELECTED CASE REPORT

A 77-year-old man presented with asymptomatic lesions on the penis 6 months in duration. He gave no history of immunosuppression, intravenous drug addiction, hemophilia or homosexuality. Two lesions were on the glans penis and 4 were on the inner surface of the prepuce. The 3 to 7 millimeter lesions had a papular nodular appearance and they were red-wine colored with a smooth surface and well-defined edges. There were no similar lesions on any other cutaneous mucous membranes. No lymphadenopathy was found and the liver and spleen were not palpable.

Excisional biopsy of 2 lesions revealed a proliferation of spindle-shaped cells lining erythrocyte-filled vascular slits and dilated capillaries lined by prominent endothelial cells on the upper half of the dermis. The stroma contained extravasated erythrocytes. Occasional atypias or mitosis was seen. Based on these histopathological features, diagnosis was Kaposi's angiosarcoma.

Routine laboratory findings were within normal ranges. Total immunoglobulin levels, percentage of T cell subsets OKT-3, OKT-4 and OKT-8, ratio of T₄-to-T₈ and lymphocyte response to mitogen stimulation (phytohemagglutinin, concanavalin A and pokeweed) were normal. Chest and abdomen x-rays, gastrointestinal series, bone series and abdominal echography were normal.

Surgery of the remaining lesions was planned but the patient did not return for treatment until 3 months later. At that time we noted spontaneous and progressive regression of the lesions. At followup 3 months later (6 months from the initial visit) the lesions had completely disappeared, leaving smooth brownish scars. Since then the patient has been followed at 3-month intervals and at 1.5 years there was no evidence of local or distant recurrences.

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Embryonal Carcinoma of the Testis: An Unusual Five-Year Survival

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Journal of Urology 96: Nov 1966; 794

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HONORÉ LH; MOLONEY PJ

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Complete Disappearance of Osteoblastic Metastasis
in Prostatic Carcinoma [letter]

WAAGE RK; STREITZ JM

Journal of the American Medical Association 238(15):
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Spontaneous Regression of Testicular Seminoma:
Case-Report

HOLMES AS; KLIMBERG IW; STONESIFER KJ; KRAMER
BS; WAJSMAN Z

Journal of Urology 135(4): Apr 1986; 795-796

Difficulties in the Diagnosis of Metastatic Testicular
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HUDDART R; MOORE NR; WILLIAMS MV; DIXON AK

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