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Carcinoma of the Kidney: Nephrectomy.

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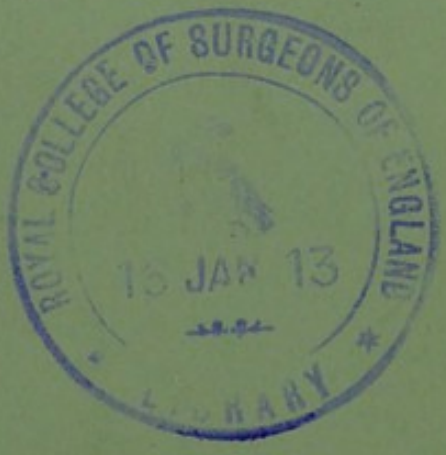

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CARCINOMA OF THE KIDNEY NEPHRECTOMY.[1]

BY

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THE following is a description of a case of primary carcinoma of the kidney, and bears out the statement that primary carcinomatous tumours of that organ are usually of the encephaloid variety. The presence of the purulent collection in the upper part of the organ probably accounted for the pyrexia, and rendered the diagnosis from calculous kidney the more difficult. It is, however, always difficult to diagnose this form of tumour until the disease is far advanced, and, as the success of any operative treatment depends chiefly on the removal of the organ, it is advisable to publish these cases in some detail when they are met with, so that the earlier symptoms may be better known. The possibility

[1] Reprinted from *The Lancet*, November 12th, 1892.

of the co-existence of calculus and malignant growth of the kidney must not be overlooked, for "the liability to error is increased when gravel or small calculi are, as is not uncommon, present in the pelvis of the cancerous organ."[2]

C. T——, aged fifty-eight, sent to me by Mr. Perry, of Reepham, was admitted into the Norfolk and Norwich Hospital on the 1st of April, 1891, complaining of excruciating pain in the left lumbar region. She was the wife of a farm bailiff and was accustomed to hard work. Fifteen years ago she had a severe attack of sciatica of the left side; it lasted for several weeks, and had the effect of reducing her, from being a fine woman, to a mere skeleton. From this she never thoroughly recovered. Some nine years later symptoms of kidney trouble showed themselves, occasional pain being the most marked; still she was well able to attend to a large dairy, and to maintain a fair state of health until twelve months ago, when she noticed that her urine was thick and sometimes stained with blood. A little later pain came on in the left loin, and localised itself there and became very intense. Later still she was obliged to keep her bed and to take opium somewhat freely. Blood was now appearing in the urine in large and frequent quantity. The pain usually came on during micturition and lasted for some time afterwards. There was no definite history of renal colic.

On admission she was greatly emaciated, very pale, and looked proportionately ill, her eyes being shrunken and her voice weak. In the left lumbar region there

[2] Bristowe: "The Theory and Practice of Medicine."

was a very distinct bulging outwards, which swelling was just as distinct in front, especially when she was placed on her back. This prominent substance—evidently an enlargement of the left kidney—was hard to the feel, very movable and extremely painful when touched, and so were the parts in which the cutaneous branches of the lumbar plexus ramified. She could usually pass the night without a desire to micturate, but when the feeling came on she was obliged to get rid of the urine as quickly as possible, however small the quantity might be. The urine was generally dark coloured and turbid, and sometimes for a few days was perfectly clear; when in this condition its specific gravity was 1020, and it contained neither pus, blood, nor albumen. There was no evidence of disease in any of the viscera except that connected with the diseased kidney. Her temperature rose every night for four weeks from 101°-102° and fell to about 99° in the morning. She had a brother older than herself who had for several years suffered pain in the situation of the left kidney and profuse hæmaturia at frequent periods; he had passed several small calculi. The severity of her pain, its constancy and localisation rendered it necessary to perform an exploratory operation, the more especially as the weight of opinion at the consultation was in favour of calculus, and the patient herself desired that something should be done to mitigate her suffering.

The operation was performed on May 1st. An incision four or five inches in length was made along the left linea semilunaris; the thin omentum and collapsed bowels were pushed to the inner side and

detained there by means of a flat sponge, the meso-colon pinched up and a small hole made in it and enlarged with the fingers. The kidney was now exposed to view; it looked healthy, but greatly enlarged. The hand was passed over the right kidney and ureter. Both were found to be of normal size and healthy. A needle was thrust into the substance of the kidney towards the pelvis; no stone could be detected. An incision was then made into the organ and enlarged with the fingers, but no calculus could be felt; the material did not feel like that of normal kidney, but was crisp, tore like hard carcinoma, which it unquestionably was. Nothing now remained but to remove the enlarged kidney; the pedicle was brought into view and two large branches of the renal veins exposed. A silk thread was passed around the whole—the kidney, artery, veins and ureter—which could not be separated from the rest. Another ligature was passed round the pedicle close to the kidney and the pedicle divided between. The organ was now removed from its bed. There had been very free venous hæmorrhage from the kidney. A large cavity was left; this was well irrigated with warm water and sponged out, a glass drainage-tube placed in the wound and the parts covered over with dressing. The kidney weighed thirteen ounces; its upper third was apparently healthy, but the lower two-thirds had become converted into true carcinoma. The capsule over this portion was firmly adherent and thickened. The upper part of the ureter was enlarged to about the size of a small orange and contained from two to three ounces of thin, fetid pus. The pelvis seemed to be almost obliterated by

the growth of the disease. At 9.30 p.m. the report was that she had had a good deal of pain in her left side, which the injection of one-sixth of a grain of morphia had relieved; she had been perspiring profusely. Her feet were warm; pulse 100. She was not restless. There was no abdominal pain. She had been taking some gruel and champagne. A teaspoonful only of blood-stained fluid was drawn through the glass tube.

The next day the account was that she had been fairly comfortable; the pain had been completely relieved by the morphia; there was no tympanites. A small amount of red-coloured serum was drawn from the tube. Pulse 100, of better volume. She took small quantities of food well. Urine had to be withdrawn and was clear. In the evening she was very comfortable. The temperature was 99·2°, and there was no sign of peritonitis. Five ounces of urine were drawn off and about a drachm of fluid from the tube.

On the third day after the operation she was said to have passed a comfortable night, sleeping well and taking food. At about 4 a.m. she complained of abdominal and lumbar pain. This had been getting worse all day. The breathing was purely thoracic; there was no sickness, no hiccough. At 3 p.m. the pulse could scarcely be felt. The wound looked well; about half a teaspoonful of blood-stained fluid was withdrawn from the drainage-tube and eight ounces of urine were taken from the bladder. The abdominal pain increased in severity and she died the next day—the fourth from the date of operation.

At the post-mortem examination, made by Mr. Donald Day, the abdomen was found to be slightly

convex, there was no distension, the wound in the linea semilunaris was quite dry and the sutures firm; the wound opened easily; very little union had taken place. The abdomen contained about three pints of semi-purulent fluid, generally distributed over the cavity; a few recent adhesions were found. The glass drainage-tube passed directly through the lesser cavity of the peritoneum into the cavity in which the kidney had laid, the wall of which was lined with ragged black clots adherent to or in the meshes of the areolar tissue. No free clots or fluid blood were to be seen; the ligatures on the pedicle were firm and secure. No stone could be found in the ureter, which was of normal size. In front of the lumbar spine was a flattened, indurated lymphatic gland lying behind the vessels, nearly one inch in thickness and apparently a malignant infiltration. This was the only example of disease to be found.

A microscopical examination of a portion of the tumour showed it to be encephaloid cancer. The amount of stroma was unusually large, and arranged in a typical alveolar fashion. The cells contained in its spaces consisted of large and small round epithelial cells.

Remarks.—This is the first nephrectomy that has been performed in the Norfolk and Norwich Hospital or in the city of Norwich. I have entered somewhat fully into the details of the case, especially in the description of the operation, inasmuch as the great question of the day is as to whether in these cases the surgeon should resort to the abdominal or the lumbar section. Dr. Gross, in an exhaustive paper

on the subject, says that of 233 cases of extirpation of the kidney 129 recovered and 104, or 44·63 per cent., died. Of 111 by the lumbar incision, 70 survived and 41 died, the mortality being 36·93 per cent.; while of 120 by the abdominal incision, 59 recovered and 61, or 50·83 per cent., perished. He then observes: "It is thus to be perceived that the fatality of the abdominal operation is greater by 13·90 per cent. than that of the lumbar operation." If malignant growths be considered, of which he gives 49 cases, very much the same result obtains in each kind of operation. On the other hand, Mr. Knowsley Thornton, the most recent authority, up to 1889, had performed nephrectomy by the abdominal section in 25 cases; 20 recovered and 5 only died, a result 20 per cent. better than that generally given for all nephrectomies, including those by the lumbar section. Mr. Lucas claims a greater success by the lumbar. He has operated in six cases by the lumbar method and all the patients survived; but then this success was due to a judicious selection of the cases; not one was for malignant disease. Of the two kinds of operation, I gave the preference to the abdominal, as being in every respect much the more suitable in this case. I had the same objections to the lumbar that Mr. Thornton has, and he gives seven.[3] With such diverse opinions it is not surprising that nephrectomy should be looked upon with some degree of disfavour. No doubt the mortality has been increased by a selection of unfavourable cases or by delaying the operation too

[3] The "Surgery of the Kidneys," 1890.—*p.* 86.

long. In my case the result would, in all probability, have terminated differently had the patient been operated on a year previously before her system became worn out by continuous pain, the more especially as the woman was free from disease in any of her organs, and only one lymphatic gland was found diseased. From what I have read of the details of the cases which have been published it appears to me that much of the want of success which has attended the operations performed up to the present time has arisen as a consequence of delay of the operation. As in tuberculosis, so in malignant neoplasms—a diagnosis made early and an operation promptly and efficiently performed are the elements of success.

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A CASE OF GASTROSTOMY FOR MALIGNANT DISEASE OF THE ŒSOPHAGUS.[1]

GASTROSTOMY is an operation the success of which depends on certain factors which are fully appreciated by the operating surgeon, but which are, perhaps, hardly estimated at their full and proper value by the profession generally. It is doubtless within the experience of most hospital surgeons to have been requested to see a patient with a view to the performance of gastrostomy for the relief of symptoms dependent on obstruction of the œsophagus, and to find the sufferer weakly, starved, and emaciated, with a very compressible pulse, dry mouth, harsh wrinkled yellow skin, hollow eyes, and a concave abdomen, the skin of which appears to be in immediate contact with the aorta. The patient has for some time been unable to swallow, absolute starvation having been avoided only by the employment of

[1] An account of this case was read at a meeting of the Norwich Medico-Chirurgical Society, on March 1st, 1892.

enemata. The surgeon knows that if he performs the operation death will most likely ensue within a few hours, although the patient's hunger may be temporarily relieved. This kind of case has in the past helped to give the operation a bad name. In order to obtain prolonged life and the fullest relief it is necessary to remember that gastrostomy should be performed before starvation has set in and before the vital powers are exhausted. There is also an immense advantage in the performance of the operation in two stages, and this cannot be done when the call for food is urgent. In malignant disease of the œsophagus the result of any operation can only be palliative and of temporary benefit, but the benefit is nevertheless frequently considerable.

A man sixty years of age was admitted into the Norfolk and Norwich Hospital under my care, on June 1st, 1891. The patient was a thin, sallow-looking man. He stated that he had been perfectly well until Christmas, 1889, when he experienced some difficulty in attempting to swallow solid food. This difficulty slowly increased up to eight months previous to admission, at which time he was compelled to live entirely on fluids. Even these occasionally gave rise to violent spasm of the windpipe, which usually lasted for an hour or upwards. On admission to the hospital he was unable to swallow the softest solid food, and fluids were taken very slowly and were with much effort made to pass into the stomach. He occasionally vomited a good deal of frothy liquid. He weighed 8 st. 8½ lb. No cause was known for the commencement of the disease in the œsophagus. Nothing could be felt externally.

A bougie met with obstruction opposite the cricoid cartilage; no subsequent attempt was made to pass it. Malignant disease having been diagnosed, an operation was recommended but refused. During the next two or three weeks he had several attacks of spasm of the glottis; these were generally more severe after taking fluid, usually lasting for some hours. It seemed as if the attempts to swallow forced the liquid into the trachea and thus gave rise to the spasm. He was now rapidly getting worse; the œsophagus had been completely closed for five days and he consented at last to submit to operation.

On July 14th the first stage of gastrostomy was performed by making an oblique incision parallel to and distant three-quarters of an inch from the edges of the ribs, just long enough to admit two fingers. The stomach was empty and lying high up under the diaphragm; it was fully drawn forwards, and two sutures of silver wire three-quarters of an inch apart were passed through the walls near the spot where it was intended to make an opening, being left with long ends. By means of these it was an easy matter to manipulate the stomach during the process of suturing. A straight needle threaded with silk was pushed through the abdominal wall as a continuous suture in a circle half an inch from the edge of the abdominal wound. At every third of an inch the needle, having traversed through the peritoneal and muscular coats of the stomach, was taken out and reinserted, so that eight or ten free loops of silk were left protruding outside the abdominal surface. A piece of indiarubber tube was slipped through all the loops, which were pulled with moderate tightness and made

fast over the tube.[2] Six sutures stitched the edge of the wound to the stomach, and the parts were covered with gauze and wool. The patient soon recovered from the effects of the operation and expressed himself as being free from pain. Thirty hours later the second stage of the operation was attempted. A small incision with a tenotomy knife was made into the organ midway between the silver wire sutures, the holding up of which not only enabled one to steady the stomach and to prevent it breaking away from its moorings, but also to know which indeed was the stomach—a difficult matter, inasmuch as the wound and the viscus itself were coated with effused dry blood. It was satisfactory to find that the serous surfaces were firmly glued together. A shortened Symond's œsophageal tube was inserted into the stomach, and two ounces of peptonised milk were passed through it in this way. The man was fed every two hours, as well as by the rectum. The next day he was comfortable, but complained much of thirst. On the third day he suffered a good deal of pain low down in the abdomen. On the fourth day he still complained of thirst and pain, but expressed himself as feeling much relieved by the operation. On the sixth day the stitches were removed, the adhesions being found to be firm ; the tube was removed and inserted when food was required. On the seventh day the patient was not well, the pulse being decidedly weaker, and the edges of the wound looked sloughy ; he still suffered from intense thirst. On the eighth day he gradually sank and died at 4 p.m.

Necropsy.—The adhesions were found to have given way. There was some local peritonitis in the region of

[2] "Abdominal Surgery," by J. Greig Smith. Second edition, 1888, *p.* 357.

the stomach, but not elsewhere. The stomach internally was quite healthy; the opening had been made near the greater curvature and towards the cardiac end. The œsophagus contained a deposit of cancer forming a ring two inches deep which completely obstructed the passage; just above its upper edge there existed an aperture which opened into the trachea. No growths were found in this tube and no cancerous deposit in any other part of the body.

Remarks.—It is perfectly surprising in how few cases of cancerous stricture of the œsophagus the operation of gastrostomy has been performed—that is, if one may judge from the instances recorded in surgical works and journals. In the last edition of "Holmes' System of Surgery," only 63 cases are mentioned, 50 of which were cases of obstruction from cancer. Dr. Gross up to 1884 could not collect more than 167 instances in which the operation was resorted to for carcinomatous stricture. A large number of these had not been recorded in the journals, but were privately communicated to him. Of the entire number 117 died in one month, and 46 survived longer than one month, the average duration of life after the stomach was opened having been thirty-three days. Of the 46 that lived upwards of one month, 2 expired in five weeks, 2 in seven weeks, 9 in two months, 2 in two and a half months, 3 in three months, 2 in four months, 2 in five months, 1 in six months, 1 in seven months, 1 in seven and a half months, 2 in eight months, and 1 in ten months. Of the remaining 18, 3 were living at the expiration of one month, 2 at forty days, 4 at two months, 2 at three and

a half months, 2 at four months, 1 at five months, 1 at six months, 1 at seven months, 1 at twelve months and nine days, and 1 at thirteen months. To prove how slowly the operation has made its way, I may mention that Sédillot of Strasburg was the first surgeon to make the attempt in a man fifty-three years of age in the year 1849, just forty-five years ago; his next case occurred fours years later. The late Mr. Cooper-Foster was the first to perform the operation in England at Guy's Hospital in the year 1858, nine years after Sédillot's first case. I will not dwell on this point, seeing that the operation had never before, so far as I can discover, been performed at this hospital. The slow progress of the operation may give rise to the question, Why perform so severe an operation when the disease is so hopeless of cure, when operative interference is only palliative, and the extension of the disease cannot be arrested, as gastrostomy can only prolong life until the disease shall kill, and a painful death from starvation is the only prospect before us? Nevertheless if an operation offers a reasonable chance of prolonging life, it is unquestionably our duty to attempt it. Why perform colotomy for cancer of the intestine? Has not colotomy become an established procedure for this disease? It is considered to be justifiable under conditions of the greatest gravity, and, indeed, may be indicated in any obstructive complication of the bowels that has passed beyond the local remedies and in which medical treatment has failed to afford relief. In many of the fatal cases already alluded to, although no permanent good was accomplished and life was not prolonged to any great length, there can be no room

for question that a certain amount of comfort and relief during the remaining days or hours was afforded. The method of operation adopted in this case needs a few words. Firstly, the division of the operation into two stages: the opening was first made in the abdominal wall, and thirty hours later it was made into the stomach; secondly, the close attachment of the visceral and abdominal layers of peritoneum, to the extent of half an inch around the wound, by means of a double ring of sutures, which provided accurate apposition under elastic pressure, and which prevented the stomach from being drawn outwards; and, thirdly, the opening of the stomach by a very small incision, so strongly advocated by Mr. Bryant, who affirms that it prevents dribbling of the gastric contents. The division of the operation into two stages is supposed to be an entirely new idea. Sédillot, in his second case, postponed making the opening into the stomach until it had become united to the parietes.

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CHLOROSIS, INFLUENZA, TRANSFUSION RECOVERY.[1]

BY

F. W. BURTON-FANNING, M.B.,

AND

CHARLES WILLIAMS.

On June 3rd, 1891, Mr. Williams was requested to attend A. D——, aged twenty-five, a domestic servant, who had been suffering for more than a year from marked chlorosis, but was now attacked by influenza, accompanied with high fever and gastro-intestinal symptoms.

She was directed to keep in bed. Three days later (June 6th), after lying for some hours beneath an open window, pleurisy developed itself on the left side. Four days later the following note was made:—"Deathly pallor, lips bluish, conjunctivæ white. Temperature 102°, pulse 128, small and sudden; respiration 60. In the

[1] Reprinted from *The Lancet*, November 28th, 1891.

left axilla below the fourth rib, there were dulness or percussion, distant breath sounds, and friction. The heart's apex beat was in the fourth space in the left nipple line, and there was a loud systolic bruit over the whole base.

The patient was ordered raw beef-juice, milk, and champagne. The side was poulticed, and she took a mixture of ammonio-citrate of iron and spirits of chloric ether. Her restlessness and distress of breathing were so great that an opiate was given at night with relief. She slowly lost ground until June 12th, when it was noted that the pulse was 160 and remarkably weak; respiration 72, and so laboured that she was scarcely able to speak. She had lost feeling in both legs, which were cold and œdematory. The tongue was dry throughout, and covered with black sordes.

Her ashy colour and painful restlessness bore a close resemblance to a case of post-partum hæmorrhage. The physical signs denoted a small pleuritic effusion only, and bloodlessness was obviously her urgent condition. To all appearances death was imminent, and as a last resource transfusion of blood was decided on. Mr. Williams quickly connected the median basilic vein of the donor with that of the patient by means of Galabin's apparatus, and allowed the stream to flow from one to the other for four minutes. The necessary dissection seemed to cause the patient no pain, and the operation presented no difficulty.

Two hours later the patient was decidedly improved, the respiration had fallen to 48°, and the pulse was not only slower (140) but less thready.

From this time she slowly made way, though her

progress was frequently interrupted, especially by symptoms connected with the stomach and bowels.

On July 9th she was just well enough to be moved from her mistress's house to the hospital, the chief trouble at this time being great œdema of both lower extremities. The pleuritic effusion on the left side had recently increased in amount, and after the withdrawal of forty-four ounces of clear serum by aspiration, the œdema of the legs began to subside, and under the administration of iron and aperients, she steadily improved.

On August 22nd she left her bed for the first time, and a few weeks later she went to Lowestoft, still very weak, somewhat anæmic, and with a large patch of alopecia developed during her illness.

Remarks.—This case illustrates the effect of two acute illnesses on a person already the subject of marked chlorosis. We believe that the influenza had a larger share than the pleurisy in increasing this anæmia to a degree that threatened life. She appeared to be certainly dying when transfusion was performed, and the fact that her dyspnœa was more alarming than the condition of the pulse, induced us to use blood rather than salt solution, though possibly the latter would have been equally successful. We regret that circumstances prevented an examination of the patient's blood.

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