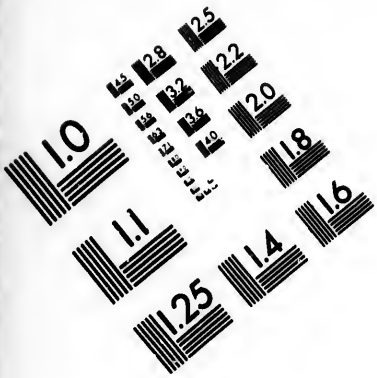

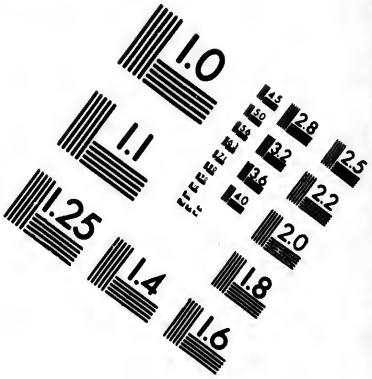

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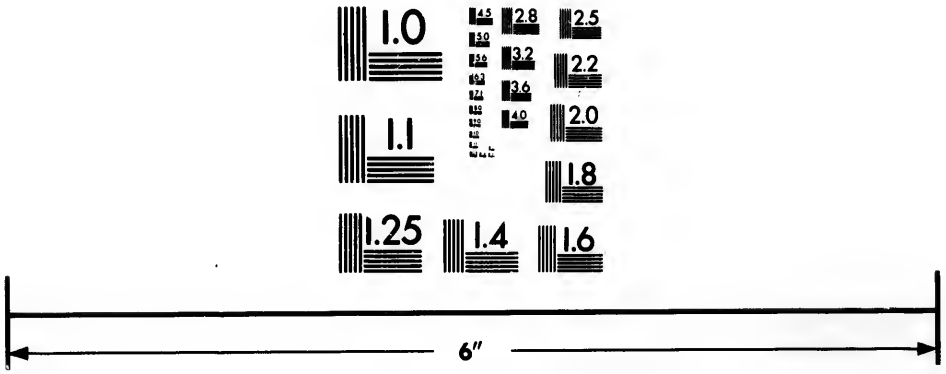

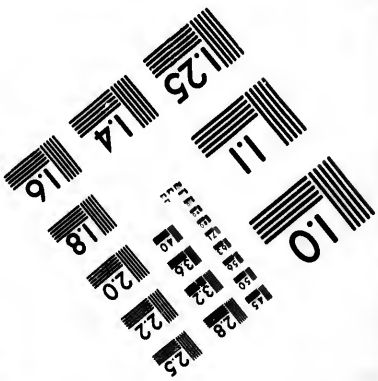

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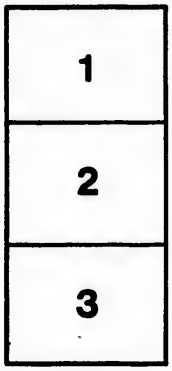

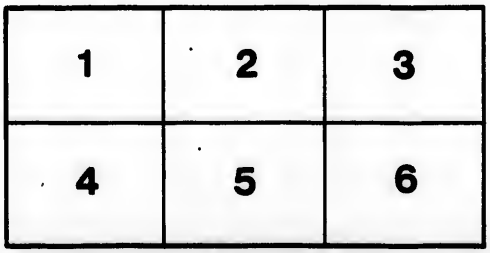

A CASE OF DOUBLE NEPHRO-LITHOTOMY.

BY

JAMES BELL, M.D.,

Assistant Professor of Surgery and Clinical Surgery, McGill University, Montreal; Surgeon to the Montreal General Hospital.

REPRINTED FROM THE JOURNAL OF CUTANEOUS AND GENITO-URINARY DISEASES

FOR DECEMBER, 1896.

A CASE OF DOUBLE NEPHROLITHOTOMY.[1]

BY

JAMES BELL, M.D.,

Assistant Professor of Surgery and Clinical Surgery, McGill University, Montreal; Surgeon to the Montreal General Hospital.

THE comparatively rare occurrence of calculous disease in both kidneys of the same subject, and the still rarer occurrence of pyonephrosis or other symptoms which call for operation upon both organs (for there can be no doubt that many kidneys which contain one or more calculi perform their functions throughout life without giving rise to serious symptoms), as well as the many risks attending double nephrolithotomy, whether both kidneys be operated upon at the same time or not, must be my apology for presenting a condensed report of the following case:

E. B., a French Canadian, aged 36, was admitted to the Montreal General Hospital on the 2d of February, 1892, with right pyonephrosis and an old and light stricture of the urethra six inches from the meatus. There was no family history of tuberculosis, and the patient had always enjoyed good health until eight years previous to admission, when he contracted gonorrhœa, and within eight days was seized with a severe acute left sciatica, for which he was treated for three months in one hospital and eighteen months in another. One year after recovery he was treated for stricture by dilatation at one of the aforesaid hospitals, and some months later he was treated for stricture again in the Montreal General Hospital. He remained well and never had any kidney symptoms until January, 1891, when he was seized with a severe pain in the right side with some swelling in the right hypochondrium and constipation. He suffered for ten days, but was only away from his work for three days. He continued his work, although at times he did not feel well, and had more or less discomfort about the right side until Christmas, 1891, when he was again seized with a very severe pain in the right lumbar region which lasted about three days, and then suddenly left him. An attack of influenza (la

[1] Read at the 7th Annual Meeting of the American Association of Genito-Urinary Surgeons, at Harrogate, Tenn., June 20th and 21st, 1893.

grippe) followed, then chills and fever, vomiting and constipation. The pain returned about the 6th of January, and the swelling became evident (to patient) a week later. On admission, February 2d, patient was fairly well nourished, but very ill, with rapid pulse, septic temperature, constant nausea and constipation. There was a firm but somewhat indefinitely outlined tumor about as large as a fœtal head in the right lumbar region of the abdomen, slightly tender on pressure, and immovable. The urine contained a large quantity of pus and albumen. Under observation the tumor varied in size from time to time, and I was enabled to diagnose a pyonephrosis of probably calculous origin. I was in doubt as to whether I should operate first upon the kidney or the stricture. On the one hand, the kidney condition called urgently for relief. On the other, I dreaded the consequences of possible retention of urine and difficult catheterization after a nephrolithotomy, specially in the septic condition of the patient, as above described. I did not entertain the idea of operating upon both at the same time. I finally decided to operate upon the stricture first, and did so on the 27th of February. The operation was internal urethrotomy. First making a section of the stricture on the roof of the urethra with Guyon's small Maisonneuve instrument, then making a section of the floor of the urethra and dilating with Otis's divulsing urethrotome, and finally a perineal section for drainage. With the exception of some slight hæmorrhage from the perineal wound there was no further trouble with the stricture, and on the 12th of March I proceeded to operate upon the kidney tumor, which had now become considerably reduced in size. A large branched calculus weiging about 400 grains was removed by section into the substance of the organ. There was very little pus. The patient rallied well from the operation and urine flowed freely from the wound. His general condition rapidly improved, fever disappeared, appetite returned, and he began to gain in weight. The urine still contained pus, though in much smaller quantity than before operation. After a time occasional attacks of pain in the right groin and bladder were complained of with frequency of micturition. These symptoms led to an exploration of the bladder in search of stone, but with negative results. The wound was completely healed by the 25th of April, and the patient was discharged on the 28th of May, 1892, well and free from pain, but with still some pus and albumen in the urine. On the 18th of October, 1892, he returned to hospital stating that he had attempted to resume his work two or three times during the Summer, but had been unable to continue it owing to weakness and pain in the left lumbar region. There was also a history of several attacks of left renal colic. On examination the left kidney was found to be enlarged and tender and the urine, which was small in

quantity (about 20 ounces per day), contained a large quantity of pus. Patient's general condition was poor and his temperature ranged from 99° F. to 101° F. Operation was performed at one o'clock P. M. on November 17th. On exposing the kidney a thinned fluctuating spot of kidney substance was incised. About eight or ten ounces of pus escaped and through this wound were removed two branched and three small faceted calculi with a quantity of fragments of stone—evidently the result of spontaneous fracture. The operation was completed without delay or accident and the wound loosely packed with iodoform gauze, but the patient did not rally well. He remained weak and pale, with rapid pulse and a tendency to vomit. During the afternoon champagne and weak beef tea were ordered, but he could not retain them on his stomach. Patient perspired freely, but passed no urine nor was there any oozing from the wound. The pulse continued small and rapid, 120, temperature subnormal, 97.5° F. And the general condition was that of a man suffering from the effects of an exhausting hæmorrhage. In a few hours the temperature become normal, although the pulse still remained small and rapid, and the restlessness, vomiting and prostration persisted until the first urine was passed at 11 A. M., November 20th, two days and twenty-two hours after operation. During this time a catheter was passed regularly night and morning, but there was no urine in the bladder. The suppression of urine, to which I attribute the foregoing symptoms, was treated as follows: a mixture of infusion of digitalis and liquor ammoniæ acetatis was first given, but each dose was rejected as soon as swallowed. Inhalations of nitrite of amyl, (three drops every four hours) were next given, and next morning a hot-air bath and a hypodermic injection of tincture of digitalis (℥ ss.) Twenty-four hours after operation the dressings were renewed and eight ounces of normal salt solution injected into the subcutaneous tissues of each thigh. Patient's condition seemed better after this infusion of salt solution, which was repeated in twenty-four hours. At 11 A.M. on the 25th 2 ounces of urine were passed and in the next twenty-four hours 7 ounces. In the next twenty-four hours 19 ounces and in the next 35 ounces. In the meantime the symptoms all improved. After the first day the urine was perfectly clear and free from blood or pus, the vomiting ceased and the further progress of the case was uninterrupted. The urine has continued clear ever since, averaging from 40 to 70 ounces, and containing only a trace of albumen. A sinus persists, from which some fragments of stone have escaped at times, but as no urine has ever escaped through it I believe it to be entirely perirenal. Patient's general health is good and his only complaint is to discharging sinus due probably to some fragments of stone lodged in the perirenal tissues.

Up to the present time only four cases of double nephrolithotomy has been put on record in surgical literature. Two of them ended fatally soon after operation and two recovered. They are as follows:

(1) In October, 1890, Dr. F. Lange presented (for the second time) at a meeting of the New York Surgical Society, a male patient on whom he had about five or six years before done nephrolithotomy on both sides. The operation on the right side was done six or seven weeks after the first one (that on the left), for complete retention of urine in the pelvis of the kidney, and he was lucky in removing from the ureter an impacted clot consisting of gravel and blood. There was also an abscess in the substance of the kidney which was opened. The patient had been in fairly good condition ever since, especially about the time when he had presented him to the society some three or four years ago. The wound on the left side by which a large quantity of stones had been removed had, however, never healed entirely except for short periods. A fistula still persisted and through it repeatedly small stones had been extracted. Lately the urine had again become more cloudy. At the bottom of the sinus some stone could be felt. (*New York Medical Journal*, vol. 1, 1891, p. 78.)

(2) On the 15th of December, 1886, Mr. H. W. Page operated in St. Mary's Hospital, London, upon the left kidney of a man aged twenty-two, from whose bladder stones had been already removed on two different occasions by perineal lithotomy. A transverse incision was made in the loin, but the kidney could neither be seen nor felt. A large cyst, however, was found and freely incised, and gave exit to pus and two small calculi. The kidney was found high up under the ribs, being very shrunken and small, but containing no calculus. In the latter part of January pain appeared. On the 18th of February the quantity of urine dropped one half, and in the next few days rose again with a vast increase of pus. There was also a return of renal pain. On the 25th of February the right kidney was exposed. It was found surrounded by stinking urinous pus. The kidney was considerably hypertrophied. No stones were found. Some collapse followed operation, but the patient did well. The wound healed slowly and did not close until the 8th of May. Patient left hospital on the 26th of May, and a week afterwards passed four small calculi after a slight attack of pain. Since then he has been free from all pain and gained steadily in health and strength. (*Medico-Chirugical Transactions*. London, 1888, vol. 71, p. 239.)

(3) In November, 1888, Mr. R. J. Godler operated upon the left kidney of a gentleman aged thirty-seven, removing a large

mass of uric acid and phosphate stone weighing 832 grains. The patient made a rapid recovery, but the closure of the wound was not permanent. During the next year the patient suffered from a series of attacks of high fever, drowsiness, diminished secretion of urine and once a stone was passed. Accumulation of pus and urine occurred in the left kidney, and at one time the ureter became completely blocked and an operation was undertaken to remove a stone which was supposed to be obstructing it. None was found, but the ureter became patent after the operation and the state of the kidney very much improved. A rubber plug was worn in the fistula to prevent these accumulations. Symptoms pointing to stone in the right kidney, it was operated upon on the 19th of November, 1890, and 480 grains of stone removed. Patient died suddenly an hour and a half after the operation as a result of hæmorrhage from the kidney. (*Medico-Chirugical Transactions*. London, 1891, vol. 74, p. 141, and *Lancet*, vol. 1, 1891, p. 144.)

(4) On the 23rd of July, 1890, Mr. G. R. Turner operated in St. George's Hospital, London, upon both kidneys of an intemperate woman, aged 45, who had had symptoms of renal calculi for about five years. At the time of the operation she was suffering from anuria, vomiting and great prostration. Operation was undertaken for the relief of the suppression of urine. "The right kidney was found full of maladorous pus with calculus formations weighing an ounce. The same condition was found on the other side. The woman recovered very well indeed from the immediate effects of the operation and lived for thirteen days. She eventually died, not from suppression of urine, but from asthenia." (*Lancet*, vol. 1, 1891, p. 145, and *Transactions of Clinical Society of London*, 1891, vol. 24, p. 157.)

In connection with the foregoing case Mr. Turner made the following statement, at a meeting of the Royal Medico-Chirugical Society, viz.: that in the post-mortem records of St. George's Hospital for twenty-one years past he had found mention of 43 cases of renal calculi, in only nine of which were both sides affected. I know of no other statistics on this subject (not having looked for them), but this fact, together with the fact that 160 cases of nephrolithotomy are now on record, in only four of which have both sides been operated upon, goes to show that double nephrolithotomy is an operation but rarely called for. An analysis of the five cases here referred to shows the net results to be three recoveries and two deaths. Of the former at least two have sinuses persisting. In one (Dr. Lang's case) the second operation does not seem to have been a very

severe one. In another (Mr. Page's case) no stones were removed from either kidney by operation. (In the first the stones lay in a cyst outside the kidney, and in the second the stones were passed after recovery from the operation.) In this case it is not stated whether sinuses persisted or not. In the third case—the subject of this paper—the recovery seems to be so far very satisfactory, and to promise well for the future, as with the exception of a sinus which, I believe, for reasons already stated, has no direct connection with the kidney, and which I hope to be able to close by ordinary surgical measures, there is practically nothing to be desired in the patient's condition. The most interesting feature of this case is the suppression of urine which followed the second operation. Of the fatal cases the death from hæmorrhage (Mr. Godler's case) has, of course, no special bearing upon the double operation. In Mr. Turner's case, the only one in which both kidneys were operated upon at the same time, one may be pardoned for thinking (although the operator states distinctly that death was due to asthenia and not to suppression of urine) that if not due to suppression of urine, at least deficient urinary secretion was the main factor in causing death on the thirteenth day. This case, however, and others, notably the case reported by Mr. Clement Lucas (*Lancet*, vol. 1, 1891, p. 144), in which he performed nephrolithotomy on the sole remaining kidney three months after nephrectomy, and on the fifth day of complete anuria for the relief of the latter symptom, with the most satisfactory result, prove that the operation may be performed with safety in the most advanced stages of pyonephrosis, and under the most unfavorable circumstances. Brought face to face, for the first time, with such conditions as above described, the surgeon may well be pardoned for hesitating to advise operation—and yet he has no alternative. Fortunately, however, the records of the double operation up to the present time offer a far more hopeful prognosis than one would be led by *a priori* reasoning to expect.