A CASE
OF
EXCISION OF A TUBERCULAR MOVABLE
KIDNEY.

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Received April 12th—Read November 22nd, 1887.

ANNIE M—, æt. 16, was admitted into St. George's Hospital under my care on November 20th, 1886. She came of a healthy family, and excepting that she had been liable to sick headaches, had been fairly healthy till July, 1885. About that time she began to be troubled with increased frequency of micturition, and the urine became thick and offensive. During the ensuing twelve months the irritability of the bladder increased; and to this was added pain in the bladder and urethra, both before, during, and after micturition; subsequently she also began to suffer pain in the right loin. The urine occasionally contained a little blood.

She did not lose flesh, had no cough, and ascribed all her trouble to the bladder.

On admission; she was a pale but well-nourished girl,

showing no marks of scrofula. She was obliged to pass water very frequently, sometimes every half-hour, or even at less intervals, and more often when up than when recumbent.

The urine produced a burning sensation when passed, but she always felt more comfortable for a time after the bladder was emptied. The amount of urine passed averaged about 26 ounces in twenty-four hours. The sp. gr. = 1014; reaction neutral or faintly acid. It deposited on standing about a tenth of its bulk of pus: under the microscope it was seen to contain a few blood-globules and crystals of triple phosphate, and a large quantity of pus.

Examination of the abdomen revealed a somewhat oval-shaped tumour about six inches long and four inches broad, which usually occupied the right lumbar region, but which could be easily made to move either up under the ribs, or down into the right inguinal region, or across to the umbilical region so that its edge projected a little to the left of the middle line. The tumour felt in some parts elastic, in other parts firm and even hard; its outline was lobulated, its inner border rounded; and it could be easily moved between the fingers of the left hand posteriorly, and those of the right hand in front of the loin. Its general shape, character, and position corresponded with those of an enlarged and movable kidney. Pressure upon the tumour produced slight pain and a feeling of nausea.

There was no evidence of any other abdominal or thoracic disease. The bladder was sounded with negative results.

Temperature and pulse were normal.

The diagnosis was suppuration, probably of a scrofulous character, affecting a movable kidney. But as the girl showed no other signs of scrofula, it seemed doubtful how far the enlargement and inflammation of the kidney might depend upon its mobility, and the consequent disturbance of the circulation and impediment to the outflow of urine

which might thus occur. A belt was therefore applied with a suitable pad for keeping the kidney as much as possible in its natural position. Large quantities of distilled water were also administered. The patient was moreover kept at rest in bed.

For a short time the rest, and the dilution of the urine seemed to give her some relief, but the pressure of the belt caused her a good deal of local discomfort. Towards the end of December she again became worse, the irritability of the bladder and pain causing her constant distress. It was also observed that whenever the kidney was subjected to manual examination a rigor immediately followed, and the temperature rose several degrees; for example, to 102.6° , to 103° , to 104.4° , on different occasions, subsiding again to the normal after the lapse of a few hours.

During the next month henbane, opium, pareira, and other drugs were administered to combat the irritation of the bladder, but none of these remedies did the least good. The pain and frequency of micturition steadily increased and the aspect of the patient became wearied and anxious.

It seemed, therefore, that the best chance of relief would be given by the removal of the diseased kidney; and in consultation with my colleagues this was agreed upon.

The operation was performed at 9.15 a.m. on February 17th, 1887, with the assistance of Mr. Dent; careful antiseptic precautions were observed, but no spray was used. The bowels had been previously cleared by castor-oil and enemata, and the patient was directed to pass water immediately before the operation.

Ether was administered, and an incision was made two inches to the right of the middle line, extending from about two and a half inches above to the same distance below the level of the umbilicus. This was intended to be in the semilunar line, but at the upper part a few fibres of the rectus were cut. The abdomen having been opened the kidney at once presented covered with its layer of

peritoneum. This was divided and the finger was then swept round the kidney so as to separate it from the surrounding tissue, to which it but loosely adhered. The outer border of the kidney projected forwards, so that the pedicle was behind the organ; by tilting it a little outwards, however, the renal artery could be felt pulsating, and the dilated commencement of the ureter could be seen. A double silk ligature was passed between the ureter and the vessels and tied on either side; the kidney was then brought out of the wound and cut away. As the ureter was divided great care was taken to prevent any of the fluid in the pelvis of the kidney passing into the wound, which was protected by sponges packed closely round the kidney.

Scarcely any blood was lost during the operation, the only vessels requiring ligature being two or three small arteries in the abdominal wall. But when the ligature was tightened round the pedicle the pulse became imperceptible for several beats, and then very rapid and feeble. It soon, however, recovered. Before replacing the pedicle within the abdomen the cut ureter was examined, and as it was found to be thickened and lined with a layer of secreting granulation tissue, it was separated from the rest of the pedicle and attached to the surface of the upper angle of the wound. The rest of the wound was then accurately closed with silk sutures, the end of the ureter dusted with iodoform, a dry pad of salicylic wool in carbolised gauze applied, and a many-tailed flannel bandage firmly adjusted over the whole abdomen.

Nothing was seen during the operation of the other contents of the abdomen, excepting just the border of the right lobe of the liver and the edge of the ascending colon.

The kidney removed is of lobulated form, and is hollowed out into a number of large rounded cavities the walls of which, bulging towards its surface, are in some places not more than a quarter of an inch in thickness. It was seen during the operation that the walls of these

cysts were so thin and soft that a very little pressure or handling would have ruptured them.

On laying the organ open its interior was seen to be filled with a quantity of creamy fluid and caseous material, and to be lined with a vascular layer of granulation tissue. Very little of the secreting structure remains, but at the lower and outer part there is a small portion of cortex to be seen, which is studded with numerous small round caseous deposits, varying in size from a pin's head to a pea. The weight of the kidney when emptied of its fluid contents was eight ounces.

The pelvis and commencement of the ureter is dilated and thickened.

Dr. Délépine has been kind enough to make a microscopical examination of some of the remaining cortex, and reports that it exhibits "a condition of progressing interstitial nephritis, in the midst of which are numerous small growths showing the usual characters of tubercle; several of them contain giant-cells, and others are beginning to undergo cheesy degeneration."

For the first twelve hours after the operation the patient was fairly comfortable. At 3 p.m. she passed involuntarily a few ounces of urine, which was absorbed by an antiseptic pad placed ready in case of need. She was thirsty, and was allowed to wash out her mouth with tepid water tinged with Condy's fluid; and as she had some pain in the loin, an opiate enema was given.

At 11 p.m. she had passed water twice voluntarily and was comfortable and inclined to sleep. Pulse 118, temp. 99°.

During the morning of the next day (Feb. 18th) she vomited three times a little blood. She was therefore given ice to suck.

The vomiting recurred in the evening. It seemed as if a little blood oozed into the stomach and was then vomited. There was very little effort or straining, and the vomiting seemed more in consequence of the presence of blood in the stomach than of a kind to provoke hæmorrhage.

Ergotine was therefore subcutaneously injected. The vomiting of small quantities of blood still, however, continuing, small draughts of hot water were given, and subsequently hydrocyanic acid, but without effect.

Enemata were given every four hours, each containing two ounces of beef-tea thickened with starch, half an ounce of brandy, and twenty drops of laudanum. During the night the temperature rose to $100\cdot6^{\circ}$. The vomiting continued, and she sank on the morning of Feb. 19th, forty-four hours after the operation.

Between the time of operation and death urine was passed at intervals of three or four hours, sometimes voluntarily, at others involuntarily, into antiseptic pads. That which was collected was coloured and turbid as if from the presence of lithates, but did not look as if it contained blood. It was put aside for examination and measurement, but by an unfortunate mistake was thrown away. As far as can be ascertained, the whole quantity probably amounted to eleven or twelve ounces. The last was passed involuntarily about half an hour before death.

The post-mortem examination was made thirty-three hours after death. The body was well nourished. The edges of the abdominal wound were everywhere firmly adherent. There was no peritonitis. The ligature was securely embedded in the pedicle, at a spot about two inches distant from the aorta.

With the exception of a few streaks of blood in the perinephral cellular tissue all the neighbouring parts were quite natural.

The left kidney was quite healthy, and showed nothing unusual excepting congestion of its blood-vessels, which was evidently quite recent. It weighed four ounces. The ureter was natural. The right ureter was natural with the exception of its upper inch and a half which was dilated and thickened.

There were a few patches of congestion on the mucous surface of the bladder near the entrance of the ureters; the organ was otherwise healthy, as was also the urethra.

There were several areas of congestion, about the size of a florin, on the mucous surface of the stomach. The organ was in other respects natural. With the exception of some firm adhesions of the left pleura, all the other thoracic and abdominal organs were quite healthy.

For the proper estimation of the value of a new operation, it is necessary that all the cases in which it is practised should be published; and as the operation of excising the kidney is a comparatively recent one, I have thought it desirable to publish this case, especially as the operation was unsuccessful, and as it seemed to me therefore, that some instruction might be obtained by others as well as myself by its being submitted to the criticism of this Society.

One feature of interest in the case is the fact that the disease was limited to this one organ, and that even the ureter was affected only at its commencement, although the affection of the kidney had existed probably for sixteen months or more. The rest of the genito-urinary tract was unaffected by any morbid change, with the exception of the small area of congestion in the bladder, and there was no sign of tubercle elsewhere in the body. But the irritation of the bladder by the tuberculous pus was very great and was increasing; and seeing that there is good reason to believe such pus to be locally infective, this furnished one strong argument in favour of removal of the kidney.

There was, of course, the other alternative of opening and draining the kidney in the loin, but the great mobility of the organ, and the probability that its secreting tissue was extensively destroyed, seemed to point to its removal as the better course.

Moreover, the observation of other cases in which the kidney had been drained through an opening in the loin, showed that though this is eminently satisfactory in calculous and some other forms of pyelitis, that in scrofulous pyelitis, though the relief may be very great, yet it is difficult to prevent some of the irritating pus still finding

its way down the ureter and keeping up irritation of the bladder.

The abdominal incision was preferred to the lumbar chiefly because the size of the kidney would have rendered it difficult or impossible to have extracted it entire through the interosseous space in the loin, and because, also, of its displacement towards the front of the abdomen.

It would probably have been better, instead of attaching the ureter to the wound, to have turned inwards its coats, sewn up its end, and returned it with the rest of the pedicle.

(For report of the discussion on this paper, see 'Proceedings of the Royal Medical and Chirurgical Society,' New Series, vol. ii, p. 306.)