see what less would suffice. The lumbar incision and external urethrotomy are not major operations, and of themselves need cause no great anxiety; but when complicated with an intra-abdominal operation the risk would be undoubtedly greater, though not so great as through leaving the patient alone. The urethrotomy seems called for not only on account of the inflamed condition of the bladder, but also because vesical tenesmus might seriously interfere with recovery from an abdominal operation. I believe Mr. Rawdon has recorded a case of nephrectomy in a youth for ruptured kidney, in which the patient recovered from the operation, but died not long after from septicæmia, which the post-mortem showed was due to the condition of the lining of the bladder. This gives another reason for performing urethrotomy or cystotomy; for if the bladder be well washed out and drained the chance of vesical septicæmia is considerably minimised or even annulled, to say nothing of the great prospect of rapid recovery from cystitis, which in such a case it affords.

A few weeks since, assisted by Dr. Carter, and by my friend Dr. Crabb of Holloway, whose patient the lady was, I performed lumbar nephrotomy on the right kidney for pyonephrosis, and before operation we discussed the propriety of making a permanent opening per vaginam into the bladder to relieve the conditions of ulcerated mucous membrane and contraction and hypertrophy of its walls; but after passing a large drainage-tube into the kidney it was hoped that very little pus would pass into the bladder, and this was so. The inflamed lining of the bladder, however, secreted a large quantity of pus, and this condition of the organ gave much trouble after the operation. I mention this case here because it and other similar cases I have operated on teach the necessity of draining and resting the inflamed viscus, and also that most cases of pyonephrosis are complicated with cystitis of a very severe form, and that the treatment of this is as important as that of the kidneys.

Grosvenor-street, W.

ACUTE HYDRONEPHROSIS OR DILATATION OF THE PELVIS OF THE LEFT KIDNEY;

RUPTURE OF SAC AND EXTRAVASATION OF URINE INTO THE PERITONEAL CAVITY; OPERATION; RECOVERY.

By JOHN W. TAYLOR, F.R.C.S.,

OUT-PATIENT SURGEON TO THE BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN.

As it is very rarely, if ever, so far as I am aware, that the abdomen has been opened for extravasation of urine into the peritoneal cavity, this case seems worthy of permanent record.

E. H—, a girl, aged fifteen, came under my care at the end of July, 1883. For a week or more she had been suffering from great pain in the left side of the chest and abdomen, with frequent vomiting. On examination I found a fluctuating tumour on the left side of the abdomen, midway between the ribs and pelvis. It was bounded above by the false ribs, below by the crest of the ilium; and a line of resonance about two inches and a half above Poupart's ligament: on the outer side it was lost beneath the muscles of the loin; on the inner side it reached to the middle line. On the morning of Aug. 1st the patient had a rigor, and the temperature rose to 101° F. Vomiting continued at frequent intervals. I diagnosed the case to be one of acute hydronephrosis; and, thinking that operative measures would probably be necessary, asked Dr. Savage to see the case with me. He kindly did so on the next day (Aug 2nd), agreed with me as to the advisability of opening the abdomen, and we fixed on Aug. 4th for the operation. The next morning (Aug. 3rd) about 8 A.M. I received a message that my patient was dying. I saw her at 9 A.M., found her with legs drawn up, pinched and anxious face, crying out with pain, and constantly vomiting. She said that she felt as if something was "running away" from her. No external discharge, however, had taken place. On examination, I found the outline of the cyst had disappeared, but fluctuation was still more evident on the left side than on the right; the abdomen was generally distended and very tender. I saw that the cyst had burst, and that no time was to be lost, as the girl appeared to be rapidly sinking. I hastily arranged for immediate operation, to which Dr. Savage and Dr. Gosling kindly came. The latter gave ether for me. About 11 o'clock

I opened the abdomen in the middle line, sponged out the urine from the peritoneal cavity, emptied what was left in the cyst with a trocar and cannula, as I could not find the point of rupture, and sewed the opening in the cyst to the margins of the incision, placing a piece of gutta-percha drainage-tubing above and another piece below the cyst-opening. The stitching the sac to the margins of the wound was the most difficult part of the operation, as it was exceedingly vascular and was with great difficulty prevented from tearing. At one part the passage of the silk suture caused a rent, and the sewing had to be repeated below this opening. The operation lasted rather more than an hour. The wound was dressed with absorbent wool, and an abdominal bandage applied, the patient being replaced in bed as soon as possible, with hot-water bottles to her feet and sides. On recovering from the anæsthetic the patient expressed herself as much more comfortable for the operation, and continued so during the remainder of the day. By the next morning, however, considerable peritonitis showed itself, and for two or three days there appeared to be but little chance of recovery. Matters, however, gradually improved; by the sixth the vomiting had ceased, the pulse, which had been very weak and thready, felt fuller, and a little flatus passed from the rectum. Some of the urine from the left kidney appeared to find its way into the bladder, as on several occasions it contained blood, and the patient complained of pain on micturition. I had not passed any drainage-tubing into the cyst, but had been content to sew the opening in it to the abdominal wall. As it had to be drawn considerably out of position to fix it in the middle line, I found that I had acted unwisely in not keeping the opening patent by tubing. After a week or ten days hardly any urine came from the opening, and the sac began to refill and enlarge with corresponding aggravation of symptoms. Knowing the thinness and brittleness of the cyst wall, I did not attempt to make any very forcible reopening of the original channel, but on August 18th made a second abdominal section to the outer side of the rectus, opened the cyst again, sewed the opening in the cyst to the margins of the incision, and passed in a glass drainage-tube. From this point the patient steadily improved. She has worn the glass-tube ever since, passing urine freely through it. In this condition she remains at present. As soon as she was thoroughly convalescent I thought that matters might be made more clean and pleasant by corking the tube and allowing the urine to escape at intervals of three or four hours into a vessel instead of allowing it to constantly run away. But I found that this did not answer, slight rigors and pain returned, and the urine from the cyst, which up to this time had appeared occasionally to find its way into the bladder, from this date ceased to do so. This was inferred from the fact that the urine passed by the urethra had previously, at irregular intervals, been offensive—at these times containing a little blood and pus. From this date the urine passed by the urethra has remained perfectly free from any abnormality. I have not attempted any further operative interference since, except probing or sounding the channel to see if I could find any calculus. This was fruitless. For the last eight or nine months the girl has remained in very fair health, although her urinary fistula is of necessity a source of great discomfort to her. Every now and then the interior of the glass drainage-tube becomes encrusted and choked with deposited urine salts, when it has to be removed and cleansed out; otherwise no treatment has been required.

The following points seem worthy of notice in connexion with this case. 1. The advisability of immediate operation in similar cases where urine or other noxious fluid is extravasated into the abdominal cavity. 2. The possibility of success, although the operation may be incomplete. I did not find the point of rupture in the cyst, and therefore for three days mourned over my operation as logically incomplete and useless; nevertheless the emptying of the cyst and cleansing the peritoneal cavity were sufficient to bring about the recovery of the patient. 3. The question of further treatment. This seems to me to be a question of great difficulty. I think there is no doubt that the left ureter is now completely stopped, all the urine from the left kidney passing by the tube. Both kidneys are perfectly healthy and secreting freely. If the obstruction be a calculus, I cannot find it from the cyst, or the channel which is the remains of the cyst. If the obstruction be due to a valvular fold or coil of the ureters, as in several cases collected by Dr. Roberts of Manchester,

the only resource appears to be extirpation of the kidney. This, however, in addition to being a grave operation, is rather contra-indicated by the consideration that the abnormal tendency to obstruction would probably exist on both sides, and if a healthy kidney were removed there would be but little chance for the patient should obstruction at any time occur on the right side. Probably, if the patient became seriously dissatisfied with her present state, as I think is likely, and asks for something further to be done for her, the best course will be to make an exploratory incision in the loin, and if no calculus can be found, to remove the kidney.

In conclusion, I wish to add that my best thanks are due to Dr. Savage for his kindness in helping me with his presence and advice both at the time of the first operation and afterwards.

Birmingham.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ROYAL HOSPITAL FOR WOMEN AND CHILDREN.

COMPLETE INVERSION OF THE UTERUS OF NINE YEARS'
DURATION; REDUCTION BY AVELING'S REPOSITOR;
CURE; REMARKS.

(Under the care of Dr. WILLIAM DUNCAN.)

FOR the following notes we are indebted to the resident medical officer, Dr. Sutherland:—

Mrs. H—, aged thirty-three, was admitted on Sept. 1st, 1884, complaining of constant flooding. She had always been a healthy woman till the present illness. Catamenia appeared when thirteen years old, her periods being regular. She was married at twenty-three, and has had three confinements. The first was premature, when eight months pregnant, "due to a fright"; the second was also premature, a year later, when seven months pregnant; the third was at full term, fourteen months after the second. She was attended by a midwife, and the labour lasted about two hours. After the child was born the patient says she "swooned away, and did not come round for some hours." She does not remember if she flooded then. About four days afterwards a large substance came away from her which she describes as being like "liver." She got up on the eighteenth day, but felt very weak. She suckled the child for eleven months, during the whole of which time she had a discharge, worse at times, principally blood, sometimes offensive. This discharge continued almost without intermission up to the time of admission, but was much more profuse every fourteen days, when she sometimes passed clots.

On admission she was well nourished, but very blanched from loss of blood. On examination a rounded smooth red mass, about the size of a large green fig, was found in the vagina. Its upper end was narrower than the lower, and the finger passed from its surface on to the vaginal roof without being able to detect any dip or groove whatever. There was no trace of the os uteri, and the sound could not be passed. Abdomino-rectal examination showed the absence of the uterus from its normal position, and the sound in the bladder could be made to touch the finger in the rectum without any difficulty. The mass could be drawn down to the vulva by means of a pair of vulsellum forceps. This caused no pain whatever, and then the finger in the rectum felt the round depression of the inverted fundus. The orifices of the Fallopian tubes could not be seen, as the vagina was very narrow, but two depressions (one on either side) were felt, and evidently corresponded with them.

Sept. 2nd, 4 P.M.—The cup of Aveling's repositor was introduced into the vagina, and a moderate amount of elastic pressure applied in the usual manner on the stem. A hypodermic injection of morphia (one-third of a grain) was given.

On Sept. 3rd the patient had slept well, and appeared

comfortable. Temperature 99° 8'; pulse 96. There was no hæmorrhage during the night, but for two hours a considerable amount of blood had been lost. The repositor was then found to have slipped in front of the uterus; it was replaced, and fixed not so tightly as before, and a few carbolised plugs were put into the vagina. The urine was drawn off twice by catheter. In the afternoon the repositor was removed, when the uterus was found to be *in statu quo ante*. After the vagina was well syringed out with carbolised water, the repositor was reinstated, the vagina plugged all round it, and considerable pressure applied, the patient being ordered to be kept under the influence of opium.

4th: The patient had a little pain during the night, but slept well. In the morning the stem appeared to have entered the vagina further, but was allowed to remain undisturbed until Dr. Duncan's visit. 4 P.M.: On removing the plugs the uterus was found not only to be completely reduced, but the cup of the repositor was in the uterine cavity, and the os uteri tightly contracted on the stem. The patient was placed under the influence of chloroform, the os dilated as well as possible by means of Barnes's bags, but even then great difficulty was experienced in extracting the cup, owing to a very tense ring of fibres which resisted the force of the hydrostatic dilators. The stem was unscrewed from the cup, which latter was then seized sideways with a strong pair of lithotomy forceps, and after considerable and prolonged traction it was extracted, but not before there was some tearing of the uterine fibres. Previous to this an unsuccessful attempt was made to divide the cup with strong bone forceps. From the laceration there was sharp arterial hæmorrhage, so the cavity was mopped out with a strong solution of iron. A hypodermic injection of ergotone (one grain) was administered, and the vagina was plugged with glycerine and iodoform. The patient was ordered to be kept well under the influence of opium. A third of a grain of morphia was at once given hypodermically, and a one-grain opium pill three times a day.

On the 5th she was comfortable but felt very low; looked excessively pale; some sickness; pulse 120, small; temperature 100°. Plugs removed and uterine cavity syringed out with a one in fifty carbolic solution at a temperature of 105°. Ordered five grains of quinine three times a day. In the afternoon she was free from pain but felt uncomfortably warm; temperature 102° 4'; ordered two ounces of brandy, lemon-juice, and ice.

6th: Slept little during the night; was sick after taking some milk; no pain; syringed as before; morning temperature 101° 4'; evening 100° 8'.

On the 7th she felt better, having passed a good night. Only complained of sickness after taking milk. Ordered a nutrient enema every four hours of beef-tea and egg. Patient asked for some beer, so was allowed one pint daily. Uterus again syringed out, but the os was so contracted that a catheter had to be used instead of the ordinary uterine nozzle. Temperature, morning, 100°; evening, 101°.

On the 8th there was a great improvement, some colour appearing in her lips, and there was no sickness or pain. Fish allowed for dinner. This was retained and enjoyed. Vagina to be washed out twice daily and an iodoform plug inserted afterwards. Ordered a mixture with ergot and tincture of perchloride of iron three times daily. Temperature, morning, 100° 8'; evening, 99°.

12th: Gaining strength and colour in face; uterus rather retroverted; replaced easily; length of cavity two inches and three-quarters. Not the least hæmorrhage since the uterus was reduced on the 4th inst.

18th: Patient practically well but still weak and anæmic; uterus normal in length and direction but the os was somewhat patulous.

Remarks by Dr. DUNCAN.—This case is a very interesting one, and teaches some useful lessons. 1. It shows the absolute necessity in every case of hæmorrhage from the vagina of insisting on making an examination, even though there be hæmorrhage at the time. Over and over again have women applied at the out-patient department with this symptom, and naturally refuse examination "as they are unwell." My rule is to prescribe an ergot mixture, and tell the patient that if the loss continue at her visit the following week, unless she then consents to submit to an examination I positively refuse to have anything more to say to her. The result is she sees the necessity and readily acquiesces. If medical men would make this a rule they will save their own reputations and their patients' health, and even life, in many cases, for it is by no means infrequent to see a woman