ABDOMINAL SURGERY AT RAIPUR.

BY J. C. POYNDER M.R.C.S., L.R.C.P.,
MAJOR, I.M.S.
Central Provinces.

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Case of Ovariotomy.

THE deep sutures were left in; they could be clearly felt under the skin when the woman was discharged. Silkworm gut, though it is extremely satisfactory as an unirritating suture, must take a very long time before it becomes absorbed, if ever it does; however, they appeared to be quite common in this case. Patient took some time to pull round, and was discharged on the 8th October, though she was practically well a month before. I allowed her to remain, as I did all the cases until they were in really good condition.

Abdominal surgery in this part of the world is in its infancy; and I think it well to allow the patients to remain until the good results of the operation—freedom from pain and distension, rest and good food have transformed the poor broken down creatures, who come here as a last resource, into healthy, fairly strong looking women, to act as object lessons to their suffering sisters outside, and persuade them, if possible, to come to hospital before they are nearly worn out by their complaint.

CASE No. 7.—Nainbai, age 30, admitted 30th May 1896. Has a large cystic tumour in abdomen which appears globular and central. Health very indifferent. As there was no immediate reason for operation, she was kept under treatment until her health improved somewhat, and she was operated upon on the 19th June 1896. The usual incision was made, only it had to be enlarged somewhat, as the tumour was very large and adherent to the wall; and, freeing it to some extent, it was found that the great omentum was spread over and adherent all over its upper surface, and the cyst itself appeared to have developed within layers of the broad ligament and had no regular pedicle. The ovary was found flattened out on its surface, and several other smaller cysts were scattered about the ligament. The main cyst was tapped and emptied; the omentum were too adherent to peel off; it was, therefore, ligatured in pieces and divided. The broad flat pedicle was tied also in three pieces and the cyst removed. I call it a pedicle, but it was scarcely a pedicle; the cyst itself had to be peeled away from the one part and many bleeding points had to be tied.

On the left side a similar smaller cyst was found; this also was removed in the same manner. The abdomen was washed out with hot sterilized water as there was some general oozing, which could not be stopped otherwise.

The wound was closed with silkworm gut sutures running through the whole wall, and a few small silver wire stitches to bring the skin into better apposition, and the wound painted over with iodoform collodion.

The temperature in this case, in spite of the rather long and severe operation, never went above 99 8.

There was a great deal of sanguineous discharge from the vagina, for which she had Condy's fluid hot douches, and for some days her stomach was very irritable and she was supported with nutritive enemata.

The bloody discharge in this case persisted for some days. She was also unable to pass urine herself for some time, and the water was drawn off by catheter.

The dressings were not removed till the 6th day, when the gauze was found to be slightly tinged with blood-stained serum, which had escaped through cracks in the collodion pelicle. The collodion stitches were removed on the 28th, as the wound had quickly healed. She gradually got stronger and was discharged on the 26th July.

CASE No. 8.—Sukuria Chamarin, 45, ovarian tumour, admitted 6th October 1896, was kept under treatment until the 15th November to improve her general health.

Operation 15th October.—There was good deal of difficulty in removing the main cyst which was adherent on the left side low down in the pelvis and there was a good deal of hæmorrhage. There was also a cyst of the right ovary about the size of an orange, this was also removed.

The abdomen was flushed out with hot sterilized water, and then about a pint of hot water was left in the abdominal cavity as the pulse had become very low. This is strongly advocated in a paper written by the Resident Medical Officer of the Rotunda, Dublin, and it had an excellent effect in this case, and materially helped to strengthen the pulse, which was further stimulated by a subcutaneous injection of Liq. strychnia and brandy and hot water enema.

Beyond some irritability of the stomach the patient went on very well; her temperature never rose above 100° until the evening of the 19th, when there was a rise to 102°. On the 20th this fell to 100 and again rose to 101 in the evening; as there was some tympanitis and distinct tenderness, a saline purgative, as recommended by Lawson Tait, was given. This moved the bowels twice, and relieved the distension, but pulse became very weak and thready. She was given small doses of brandy and hot water frequently. Temperature had dropped again to 99°, and she gradually improved.

Dressings were changed on the 19th, again on 24th, when some stitches were removed. The other remaining stitches were removed on the 30th.

The wound had apparently healed, but there was a distinct local area of hardness on the left side where the thick suture on the pedicle was.

At the next dressing (the fourth) a small sinus was found leading down towards the womb, from which a very little odourless pus could be squeezed out. This sinus was carefully and gently syringed out, and a small gauze drain left in it, as I have no doubt it came from the ligature round the pedicle. The temperature had been hovering for the last two days between 100° and 99°F., and there is no doubt that the timely clearing out of the sinus prevented worse mischief. There was very little discharge, and the wound was dressed every day or every other day.

The wound of operation had all healed with the exception of this sinus.

It was a long time before this sinus healed, which it did finally, and the woman was discharged on 10th January, having been in hospital three months. I have no doubt that the silk suture on the pedicle must have caused the trouble. I expected that it would gradually work its way out, but it was never found, nor could I find anything feeling like a foreign body when I cautiously probed the sinus on one or two occasions. I may state, however, that this was done very carefully. I was not anxious to poke any small holes through the newly-formed adhesions into the peritoneal cavity.

Hysterectomy.

CASE NO. 8.—Saushir Keotin, age 30, admitted 29th September 1898. Patient has a large tumour extending to half-way between the umbilicus and ensiform cartilage. The tumour was fairly moveable.

A sound was passed with some difficulty, and passed in six inches; and it was apparent that the uterine cavity was much stretched by the tumour, which was, therefore, probably embedded in the mass.

The tumour itself had a hardish elastic feeling with an obscure sense of fluctuation in places, as from a deeply situated cyst.

The woman was fairly nourished, but complained of a good deal of pain in the tumour and great discomfort from its weight. She menstruated regularly but the quantity was above normal, and it lasted some days. She stated that the tumour had increased very considerably during the last few months.

I believed that this must be a rapidly-growing intra-mural fibro-cystic tumour, and that it would be better to remove the uterus with the tumour.

The woman was kept under treatment. The operation was delayed as the woman menstruated about the 18th. She was however well and in good health by the 26th. She was therefore prepared for operation; a mild purgative, abdomen cleaned and sterilized as far as possible with biniodide of mercury lotion. A nutrient enema with opium was administered on the morning of the operation, which took place on the 29th.

The usual incision was made, but in order to deliver the tumour it had to be increased about an inch above the umbilicus.

There were some deep cysts in the tumour, and they were tapped but contained only a small quantity of thick matter, and did not materially diminish the bulk of the tumour, which consisted of an enormously distended uterus. The ligaments and attachments on the right side were first divided, the peritoneum was incised, and drawn down towards the cervix. The left side was left as long as possible, because there appeared to be a large mass of matted tissues on that side, with a number of large tortuous vessels; and I thought I should have a better chance of dealing with these if I could get a ligature on the cervix low down, and then tighten this up and work down from the upper left side, tying and separating as I went along. My object being if bleeding became very free to get the huge mass out of the way as quickly as possible, as it greatly obstructed not only the view, but also the freedom of manipulation. In getting the ligature round the neck or in separating the matted parts, I tore through some vessel and the very severe hæmorrhage commenced. I at once plunged in a pair of large Spencer Wells forceps, and at the first attempt fortunately caught and compressed the bleeding vessels. I as rapidly as possible finished putting the ligature on the neck, and then separated the attachment on the left side, and removed the uterus by cutting through the cervix above the ligature. I then proceeded to tie all the bleeding points. In searching about for small vessels which kept on bleeding, I suddenly came across the end of a cut tube, and after following it along a little way it was quite clear that I had got the left ureter cut, for while I was handling this a few drops of clear urine suddenly oozed out. These were mopped up at once and the spot cleansed with carbolic lotion, while the ureter was compressed. I felt greatly grieved and disappointed at this unfortunate accident, and I could not find the other end of the ureter; it had no doubt become included in one of the ligatures, probably that going round the cervix. However by this time the patient was beginning to show symptoms of failing strength, and I had to do something quickly. I don't know quite whether I was correct, but I hastily determined to try and graft it into the bladder. A catheter was passed by the nurse, and the bladder opened on the point of it. A needle with fine catgut was then passed through the wall of the bladder, about half an inch from the incision—

that is from the abdominal surface into the cavity of the bladder and brought out through the incision. It was then passed through one side of the cut end of the ureter and made fast. A similar stitch was passed through the opposite side, the ureter was then split a little so that when the two threads were drawn on from opposite sides, it would open the orifice of ureter. The two threads were then drawn on, and the end of the ureter humoured through the small incision; the catgut ligatures were then drawn on sufficiently to open the cut-ends of the ureter and drawn back against the wall. The peritoneum was drawn back on the ureter, and sewed on all round to the peritoneal covering on the bladder. I hoped this would make a firm union and would allow of free passage of the urine.

The union I believe was good enough until an unusual strain was put on it. I fear, in putting in the peritoneal stitches I must have given a brush to the ureter, and prevented the passage of urine along it. At any rate after events showed that there was no leakage for some time. After this was concluded the peritoneal cavity was well flushed out, and several small clots removed, and then about a pint of hot sterile water was poured in, and left in the abdominal cavity.

The peritoneum was sewed up with a continuous suture, and the muscular wall and skin also with separate lines of interrupted sutures. A small drain of sterilized twisted silver wire was left in the lowest angle of the wound.

I forgot to state that the edges of the stump were drawn together as much as possible, and the peritoneum which had been dissected off the body of the uterus was sewn together over the stump so as to cut it off completely from the general peritoneal cavity.

27*th.*—In the evening the patient was very comfortable, and had passed urine herself, her temperature only reached 99°.

On the 30th the dressing was changed, and the drain taken out, only a small amount of blood-stained serum was on the dressing, and the wound appeared to have united except where the drain had been. She went on very well until the 4th of the next month, when she began to show signs of some irritation somewhere. However, as her temperature never went above 100·4, I hoped it was merely a temporary derangement, and for some days again her temperature was normal; the wound had healed with the exception of a small piece where the drain had been, but on the 11th there was a good deal of discharge of a serous character on the dressings, and a sinus was found leading down towards the stump of the uterus. On the 13th a considerable amount of urine suddenly came out of the wound, and it was then clear what had happened. The urine, not being able to escape along the left ureter owing to some obstruction, had gone on collecting in the ureter and pelvis of the kidney until the distension had reached a point where they now could not hold out any longer, and the retained contents of the ureter had been suddenly poured into the peritoneal cavity. As far as I could judge there was only one thing to be done, either to find the end of the ureter again and bring it outside through the wound or else remove the kidney.

On the 13th I opened the abdomen again and found the lower part much matted together with lymph, and a considerable amount of semi-purulent fluid smelling strongly of urine, but there was no offensive smell.

I was unable to find the end of the ureter in the mass of matted intestines, so I proceeded at once to carefully turn the intestines over to the right and opened the peritoneum over the kidney which was removed without much trouble. A counter-opening was made in the loin through which a large india-rubber tube was passed. The whole abdominal cavity was washed out several times with hot boric lotion; the abdominal wound closed in the usual way. I may say I could not find the opening into the bladder as it was apparently all sealed with the newly-deposited lymph.

The operation took some time; the patient suffered considerably from shock, and her temperature was 97·6. Pulse very small and thready. She was, therefore, given an intravenous injection of warm sterile normal saline solution which had been kept ready. This brought her temperature up to 99·2 and pulse 114.

The whole surface of the kidney was covered with little cysts of urine, I suppose from the back pressure, and the pelvis was a good deal dilated.

In the evening the patient passed urine herself which was quite clear. The temperature had again dropped to 97·4. She was given small quantities of warm milk and brandy.

14*th.*—Her temperature remained slightly below normal, and she seemed fairly comfortable, but the pulse was getting weaker.

The drainage tube from the loin was kept in a bottle of warm carbolic lotion, and the abdomen was washed out through the front wound with hot boric lotion; at first it came out very thick, and the carbolic lotion had to be frequently changed; but on the 14th there was practically no discharge, and the lotion came through quite clear. Urine was passed voluntarily three or four times daily and was quite clear and natural. Her temperature remained low, and I found this was partly on account of the carbolic lotion into which the drainage-tube emptied being below the body temperature; it was afterwards placed in a tin of hot water which was kept continually hot, and the temperature went up to normal. The patient, however, never seemed to rally in spite of free stimulation

and gradually sank, dying on the night of the 16th.

The unfortunate accident of finding the ureter divided at the end of long operation, when the patient has been under chloroform some time, is a very serious complication. I think on the whole I should have been wiser to have brought the ureter out through the wound and then taken special care to help the wound aseptic. I see no reason why a fine catheter or tube should not have been kept in the ureter and the urine drained out. I cannot help thinking that had it not been for the retention of urine in the left kidney and ureter, and its subsequent escape into the peritoneal cavity, that the case would have recovered. These cases are most distressing and very trying. In this country one has rarely experienced colleagues to consult with, and in the hurry of the moment it is difficult to weigh the *pros* and *cons* of the various sides of a question. However, I think it is clear that it is possible to graft the ureter into the bladder, and I am inclined to think that a fine straight catheter might, certainly in a woman, be run into the ureter while the junction was being effected, and might even be left for a few hours without any harm; and had this been done very likely the obstruction would not have occurred. I hope, however, that this accident may not occur to me again. As the case went I think the second operation could not have been avoided, and the free drainage of the peritoneal cavity and the clearness of the later washing showed that the peritonitis had been practically got under, moreover the temperature remained normal or sub-normal; and I think it would have gone up had the peritonitis increased.

CASE No. 9.—Salu Bai, age 50 years, admitted 18th June 1898, has a tumour about the size of six months' pregnant. Uterus having the hard elastic feeling of a fibro-cystic tumour. The old woman complains of a good deal of pain, and is rather feeble and anxious-looking and has a very weak pulse. Declines to allow vaginal examination, but is anxious to be relieved of the tumour. She was kept in hospital a month, and her general health improved somewhat, and she was operated on the 14th of July.

14th July.—The usual incision was made, and as there was a softish place in the tumour, an ovariotomy trocar was passed into a cyst, and about eight ounces of thick glairy matter removed. This did not materially alter the size of the tumour.

The ligaments were ligatured on both sides, and the neck of the uterus cleared; the peritoneum was dissected off the body of the uterus and a thick ligature passed round the cervix, the attachments were divided, the neck cut through, and the uterus removed. There was not much bleeding. The stump was covered with peritoneum which was sutured over it with fine catgut.

The abdominal wound was closed completely, the peritoneum sewed up with fine suture of catgut, and the layers of the wall sutured separately. Patient stood the operation very well, and had a fairly good night after morphia injection.

About 1-30 on the 15th, the temperature went up to 102° patient complained of pains in the stomach which was rather tympanitic. A long rectal tube was passed which permitted the passage of a quantity of flatus, and a hot turpentine fomentation over the upper part of the abdomen relieved the symptom. The fever fell to 100°. The next morning a hot saline draught* was given as recommended by Lawson Tait—to be given in two ounces of hot water. About three hours after this she had one motion. Patient was troubled with rather troublesome vomiting, and was supported largely by nutrient enemata.

There was a good deal of sanguineous discharge from the vagina which necessitated careful douching with hot Condy's lotion. However, the patient recovered ground gradually, the dressings were changed on the 20th, and only a little blood-stained serum had come from wound, sutures were removed on the 22nd, and she was practically well on the 26th, with the exception of the sanguineous discharge from the vagina, and the debility from which she suffered. However, she began to mend rapidly about the end of the month, and was discharged cured on the 13th August. I was assisted at both these operations by Assistant-Surgeon Surendranath Sircar who afforded me most valuable assistance. Chloroform was given by Hospital Assistant Mudhu Soudan Dass in nearly all these cases, and it was principally due to his unremitting care and attention to the patients night and day that some of the serious cases recovered. He was ably assisted by the female hospital assistant Mrs. George and the two nurses of the hospital.

It may not be out of place here to give some account of the methods we use in preparing the patients for operation. In uncomplicated cases we have hardly ever seen such a thing as pus, and the wounds have healed rapidly. It may appear that the patients are a very long time under treatment, but I have already explained that patients cannot be persuaded to submit themselves to operation until they are worn out by pain and suffering, and consequently they are not in as good state as one could wish for such serious operation. However, one must make a start, and I hope the ten or eleven successful cases which have left this hospital will serve to send more here, as they are never sent to their homes until they are really well.

* Rx.—Magnes. Sulphat. ... ℥iii
Sodii Sulphat. ... ℥i
Sodae Tartarat. ... grs. 40.

The day before operation the patients have a mild purgative, and the abdomen is shaved if necessary and thoroughly washed with soap and water. This is dried off, and it is then thoroughly rubbed with oil of turpentine and again washed. By this time it is fairly free from greasiness, and it is rubbed with a solution of biniodide of mercury 1 in 500 and piece of lint wet with the same lotion but weaker, 1 in 500, is applied over the abdomen covered with cotton-wool and bandaged. The whole of this process is rapidly repeated on the operating table. All sponges, towels, and dressings are sterilized; towels and sponges by boiling for some hours and then transferred to hot carbolic lotion. The dressings are kept in tin boxes and heated up till the cotton-wool is slightly browned on the edges.

Early in the morning the patient has a warm soap and water enema, and about an hour before operation, a nutrient enema of milk, yolk of eggs, pepsine, brandy and tinct. opii 3ss.

I attach great importance to this enema, and I find that patients stand long and serious operations much better than they did before I commenced giving it to them.

I give nearly all cases, if at all restless, morphia hypodermically after the operation.

The hands of all assistants receive great care, and I need hardly say that I am careful to cleanse my own most carefully, and soak them for some time in biniodide lotion. I do not think biniodide of mercury is half sufficiently known or appreciated. I first read of its use systematically in Lockwood's book on Aseptic Surgery, and if anyone wants a thoroughly practically little work on the subject, I can strongly recommend him to get Lockwood's little book. The virtues of biniodide lotion are there set forth. It does not coagulate albumen as does the perchloride, and penetrates, therefore, into the utmost recesses of the wound instead of coating them with an insoluble layer of coagulated albumen.

In this respect I wonder it has not received more attention from the plague authorities. We read much of the difficulty of disinfecting cowdung floors, because of the albuminous nature of the compound, enveloping and protecting the microbe and preventing the action of the perchloride. I am thankful to say that hitherto I have had no opportunity of experimenting on that particular microbe. But on the microbes of septicæmia and decomposing pus generally, I have had practical experience of its wonderfully antiseptic character. In two cases of commencing septic fever, I was delighted to find the symptoms relieved after a few douches of this lotion.

In one case there was the unmistakable odour which accompanies septicæmia. The patient's temperature 105°, with that bright flushed face so indicative of the commencement of that gravest of complications. A few douches of this lotion and a smart purgative quickly, I am glad to say, altered the condition of affairs, and I am glad to say the patient recovered without further complications.

It is not so destructive to instruments as the perchloride, and it has only one drawback as far as I know. It is a very great deal more expensive, about four times the cost, so that, perhaps, in large quantities, the cost would preclude its use. Still, if effective, it would be better to pay it and destroy the plague microbe; and I offer this suggestion for practical experiments for any with plague microbes to experiment upon.

I hope to report some cases of radical cure of hernia, with some remarks on the operation shortly.

CASE OF ALCOHOLIC PERIPHERAL NEURITIS WITH DILATATION OF THE CARDIAC VENTRICLES FROM PARTIAL PARALYSIS OF THE HEART MUSCLE.

PERIPHERAL NEURITIS OF THE PNEUMOGASTRIC.

WITH COMMENTS UPON THE CASE.

BY WM. GLEN LISTON, M.B., LT., I.M.S.,

Offg. Medical Officer, 6th Infantry, Hyderabad Contingent, Hingoli.

NAICK VENKANNAH NAIDOO (writer) aged thirty-eight, service eight years, admitted to hospital on 21st June 1899, complaining of pain in the calves of the legs; numbness over the abdomen; inability to walk far from weakness of the legs, breathlessness, and palpitation; swelling of the feet; and passage of blood by the rectum.

Previous health.—His medical history sheet showed two admissions for rheumatism, and, although it is noted as being muscular, from a description of his symptoms, and the marks of blisters over the knee-joints, the disease seems to have been articular rheumatism, probably subacute, for the fever, from which he suffered at the time, was only of slight degree.

Unfortunately, no notice was taken of the condition of his heart. He states he never had pain in that region.

Habits.—He has been intemperate, drinking in excess chiefly at night, of native-made alcohol.

General examination.—The patient's face is rather puffy, there is œdema over both ankles, but only to a slight extent. Pupils normal and react to light and in convergence. There is no swelling of any of the joints, and no pain in them. His gait is somewhat unsteady; as he progresses his toes tend to droop a little; so the feet are raised well above the ground. There is