of a calculus is near the bladder, or so far down the ureter as to be quite away from the possibility of dislodgment.

My suggestion is to establish a fistulous opening in the loin (by nephrotomy) for the escape of the urine; and if the operator be so fortunate as to light on the stone at the upper end of the ureter, so much the better prospect of obtaining a satisfactory result.

The first question anyone contemplating the operation would need to determine is, on which side to operate. I think the symptoms are usually sufficiently marked to settle this easily, as, for instance, in the following case. A publican, aged 50, apparently in good health, ceased to pass urine on the morning of October 31st, 1882; and, from that time till the evening of November 7th, when he died, he excreted no urine whatever. He suffered considerable pain in the right loin, with some nausea, but there was no perceptible swelling, and but little disturbance other than the anuria. I think there can be no doubt he had a calculus impacted in the right ureter; but this would not have caused complete suppression unless the other kidney were previously destroyed; and in evidence of this was a history of severe and continued pain in the left loin about three years before. I saw him a few hours before his death, in consultation with his medical attendant, who had made out every feature of the case, and supplied me with the facts. Circumstances did not permit an operation; but, if I had again an opportunity of seeing an identical case in an early enough stage, I should certainly consider the advisability of an exploratory incision in the right loin.

The case of Mr. Wilmot presents several peculiarities. In the first place, there was the rare condition of complete absence of one kidney, though this fact only brings it to a state of matters parallel to what ordinarily exists in complete suppression.

Then the stone, though at first blocking the ureter, was practically in the kidney, on the tissue of which it had for a long time been exercising its disorganising effects. For the first two or three days of the fatal attack, while the patient was calm and composed, with clear intellect, without headache, sickness, or fever, the symptoms were those of obstructive suppression simply; but when rigors supervened, with swelling and resistance over the region of the kidney, there was the obvious complication of suppuration in or around the organ. As Mr. Wilmot remarks, the immediate cause of death was abscess, not uræmia. I concur with him in saying that the man would not have derived lasting benefit from aspiration alone, though I think information of some value would have followed its use. The stone would probably have been detected or the abscess evacuated. But I strongly support Mr. Lucas in his remarks on nephrotomy (obviously misprinted nephrectomy) as a means of treatment in this case. An incision in the loin made before the symptoms of suppuration set in, would have led to the removal of the stone, have relieved the suppression, and probably have averted the fatal damage to the kidney.

If the principle of operation be accepted as applicable to these cases, there still remains to decide when such should be performed. A previous history of suppression, with pain on the same side, or previous attacks of nephralgia, would point to the presence of a calculus lodged in the pelvis of the kidney or in the upper end of the ureter, and would indicate an operation for the double purpose of removing the stone and relieving the suppression; and, as the further retention of the stone must lead to destructive disorganisation of the kidney, I agree with Mr. Lucas's view, that the surgeon is justified in operating early under these circumstances. Swelling and resistance in the loin, with rigors and fever, point to suppuration, and really demand the very simple proceeding of an incision down to the kidney, though it is doubtful whether it would not now come too late.

In a first attack of suppression, and without previous nephralgia, the decision may be more difficult, because spontaneous relief is not uncommon. One such recovery, after twenty days' complete anuria, is recorded by Dr. Russell (*Medical Times and Gazette*, 1879). I believe the average duration of life is from six to eight days, death usually terminating the scene rather suddenly, and without uræmic symptoms. I know that a patient can live five whole days without a particle of renal tissue in the body, and suffer very little obvious disturbance (*BRITISH MEDICAL JOURNAL*, September 1st, 1883). But I think the surgeon would be justified in operating almost at any time, for he can do very little harm, though he might receive the blame of an unavoidable death in case of failure to relieve.

In conclusion, my apology for occupying so much valuable space must be found in the remarks with which Mr. Wilmot closes his interesting paper, viz., "The usual treatment was followed in this case." Undoubtedly such was the fact, and, let me add, it was followed by the usual result—death. Whether the proposed departure from the usual treatment will ever lead to any other result, time and experience must determine.

ABDOMINAL SECTIONS PERFORMED DURING 1883.

By THOMAS SAVAGE, M.D., F.R.C.S.,
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THE following remarks are based upon the work done by me in hospital and private practice during the year 1883. It comprises a total of 85 cases of abdominal section. Of the 85 patients, 83 were females, and 2 males; and of the females, 66 were married, or widows, and 17 were single.

I think the custom is a good one, which has now for several years been observed by some of those practitioners who are doing a large amount of abdominal surgery, of recording publicly the amount and results of their work.

It is due to the public, to the profession at large, and to ourselves, that some means should be known by the profession by which the results and progress of this branch of our art are capable of being tested; at all events for the present and the immediate future, during which much that is new, both in the nature and in the details of abdominal operations, is likely to occur.

Analysis of the Series.

Cases.	Deaths.	Cases.	Deaths.
Cystoma of ovary:		Hepatotomy for hydatids	1
One ovary	20	Hydatids of peritoneum	1
Both ovaries	4	Papilloma of peritoneum	1
Fibroma of ovary	1	Tumour of kidney	1
Parovarian tumour	4	Nephrectomy	1
Dermoid tumour	1	Enterotomy for obstruction	1
Removal of uterine appendages for:		Hæmatocele (opened and drained)	1
Chronic ovaritis	12	Pelvic peritonitis	8
Uterine myoma	8	Exploratory operation for:	
Metrorrhagia	1	Uterine myoma	3
Hydrosalpinx	4	Malignant tumour	3
Supravaginal hysterectomy	6	Pelvic tumour	1
Extra-uterine foetation	1		
Cholecystotomy for gall-stone	1	Total	85
			4

In 4 instances death occurred, I mean as a result, more or less directly, due to the operation. The cases were as follows.

1. A patient, aged 58, with a very large cystoma of the left ovary, with purulent contents and considerable adhesions. She had allowed herself to get as near to the grave as possible, and could certainly have lived but a week or two if not operated upon. In fact, I did it, at the urgent solicitation of a friend, with the idea of giving the poor creature just the chance which it afforded her of her life. Drainage was used.

2. A patient with double cystoma, referred to me by Dr. J. W. Taylor. The right tumour was full of pus, and universally adherent, having to be literally picked out of its bed. Here drainage was used.

3. A case of nephrectomy; kidney (right) very large and full of pus. A clamp was used to the meso-nephron. I think that, if I had used drainage here, the result might have been different.

4. A case of supravaginal hysterectomy. A large fibromyoma, eleven pounds in weight, was removed. The operation was all that could be desired. She died in less than forty-eight hours after the operation, with symptoms of apoplexy. *Post mortem*, there was found a large hæmorrhage, extending backwards from the external part of the right caudate nucleus, and rupturing into the right lateral ventricle; the peritoneum was healthy. She was a woman with dilated facial capillaries, and was subject to frequent attacks of bronchitis; aged 59.

During the year, I used drainage twelve times. Two of these were among the fatal cases. Although I cannot call to mind any of the other cases where I might with greater advantage have drained, but did not, yet I often think we might drain much more frequently than we do. It cannot do harm; it may do good.

None of the cases were performed under what would be styled "strict antiseptic precautions"—i.e., Listerism; but I was always very careful to pay the strictest attention to cleanliness. Having seen operations done under the spray, which is often used to cover a multitude of other deficiencies in the Listerian system, I have sometimes come away feeling that my own operations were at least as aseptic. The record of our work at Spark Hill, which is published in the annual report of the hospital, will disabuse the mind of anyone who is not prejudiced in favour of the necessity or even superiority of Listerism in abdominal surgery. Not one of the deaths mentioned above could be ascribed to its absence.

In one instance, death has occurred since the operation. It was a case of a young single woman with great emaciation and a very rapidly filling abdomen. It was thought likely to be either peritonitis or papilloma of the peritoneum. When the abdomen was opened, there

was found much ascitic fluid, a small cystoma of the left ovary, and a large mass of indurated lumbar glands. She easily recovered from the operation, but died a few weeks afterwards, from the progress of the original malignant disease. She was under the care of Mr. E. H. Addenbrooke.

Four or five years ago, when cases of uterine myoma required surgical interference, I was strongly in favour of making an attempt at removing them by abdominal section, and I had very fair results for that period in the history of these operations; but it was not settled in at all a satisfactory manner what was the best method generally applicable to the treatment of the stump—whether it should be extra-peritoneal or intraperitoneal. The latter was regarded with rather the most favour, in consequence, I suppose, of its having become general in ovariectomy about this time. I then inclined to the treatment of these cases by removal of the uterine appendages. This plan is often of the greatest benefit; it is generally easy and safe. It is sometimes impracticable, on account of the size of the tumour, and the consequent difficulty of reaching one or other ovary. It is sometimes also ineffective.

I have, therefore, lately been again more inclined to the total removal of these tumours by abdominal section, when possible. Supravaginal hysterectomy is an operation much less dangerous than formerly—especially so if we resolve to treat the stump extraperitoneally; and it is, of course, if successful, permanently curative. Removal of the appendages is to be advised when the major operation is impracticable, and when the myoma is a bleeding tumour, rather than one of the soft variety.

To remove the appendages after the menopause would not be likely to be of much service, unless, by ligation of the spermatic arteries, it caused shrinking and disappearance of the tumour by diminution in the supply of blood.

Complete removal of these tumours ought, as a rule, to be much more successful than is the case with what may be styled "bad" ovarian tumours, and each year lately the operation has been becoming both easier and safer.

There are a few cases of myoma met with involving very largely the lower segment of the uterus, in which it would appear as next to impossible to make a stump for inclusion in a clamp. We are often tempted to attack such a tumour from the vagina by division of the cervix and incision into the capsule. Occasionally this has been attended with success. I have seen a few cases; but the risks of septic infection are so considerable, that I would strongly advise the abdominal operation in preference, if there be the slightest prospect of its practicability. If the vaginal method be adopted, I am sure the safe course is, after the first cutting has been efficiently performed, to do as little as possible, avoiding the use of tents for dilatation, and leaving nearly all to Nature in her efforts at expulsion. Attempts at enucleation open the door to a fatal issue.

In supravaginal hysterectomy, if the stump be short, causing a dragging on the abdominal wound when the clamp has been adjusted, I think the use of a transfixion-pin is of the greatest importance. In one of my cases, where this was not applied, the uterine stump gave way during an effort at straining; in fact, slipped its moorings, and subsided into the pelvis. Although the termination was favourable, yet it was an accident that caused a great deal of anxiety, and was one that might have been prevented had I taken the precaution of transfixing the stump to the abdominal wound.

The case of cholecystotomy was in a gentleman, a solicitor. Being a nervous subject, and of sedentary habits, he had for years been conscious of the possession of a liver. He had consulted an eminent specialist for such cases, who told him that he had a hydatid tumour connected with the liver, and that it should be punctured by aspiration as soon as possible, proposing himself to do it. When I was consulted, I at once found the presence of the tumour, and said that it was probably hydatid, but that it would be better to perform an abdominal section, and treat the tumour in the best way that was thought advisable when it was exposed to view. It was put before the patient as being an operation not less safe than aspiration, and yet more likely to be curative. This plan was agreed upon, and fourteen stones, varying in size, were removed. These stones I had the honour of showing before this Branch a few months ago. The tumour was about the size of a medium coker-nut, and was, in fact, a distended gall-bladder. On tapping it, the first two-thirds of the fluid was transparent and colourless, and a little viscid; the latter one-third was bile-tinged, in fact, appeared to be pure bile. I very much regret that the fluid was thrown away in the confusion of putting straight after the operation. It has been suggested to me, in explanation of the presence of these two fluids in one sac, that the colourless fluid might have been indeed hydatid, and was kept distinct from the true bile by a wall formed of

the stones, which, on the collapse of the gall-bladder by the escape of the clear fluid, broke down, and allowed the bile above it to escape also. The appearance of, and the facets upon, the stones pointed to their having been in close contact before their removal.

This case is interesting in itself, but also more on account of its showing the inutility of advising aspiration, when a tumour can be directly treated under one's eye and touch. Here aspiration would not have been of the slightest use, and might have done much damage. Indeed, it would have been more risky than an abdominal section, as bile might without difficulty have escaped into the peritoneum; and, as a matter of fact, Murchison and others have reported a goodly number of cases of tapping followed by a fatal issue.

To prevent the future recurrence and dropsy of the gall-bladder, Langenbuch, in 1883, has recommended extirpation of the gall-bladder. Three of such operations appear to have been successfully performed. Langenbuch advises to begin by detaching the gall-bladder from the liver, and to tie the cystic duct.

While speaking of hydatids, I would just mention the case of this disease affecting the peritoneum. In the one instance which I had in the year, it was clearly the result of delay in operating, the patient not consenting; as, nine months before I saw her, she had a distinct liver-tumour, which was diagnosed as hydatid by my colleague, the late Dr. Hickinbotham, who then advised her at once to have surgical help. About two weeks previous to my seeing her, her abdomen suddenly increased in size. Had this patient taken Dr. Hickinbotham's advice, in all probability the operation would at that time have been a very simple one, and entirely curative. She was first of all tapped with an ordinary trocar, and then afterwards, as she very soon refilled, I made an abdominal section, and evacuated the fluid, sponging out the peritoneum. Dr. Annie Clark examined the fluid, and found it to be hydatid. This patient is now able to do her housework, having been reduced to her proper size. She has a small peritoneal fistula, which discharges a small amount of what appears to be merely pus.

There was nothing specially noticeable about the extra-uterine foetation, except that the clinical history was perfect, and assisted greatly in forming a diagnosis. The patient, at the time of operation, had passed the period of spurious labour about six weeks, it being attended with pains, secretion of milk, and diminution in size. After this, she had an inflammatory attack.

At the operation, the sac was found to be considerably attached to the abdominal wall. The placenta was, of course, left untouched, and some portions of it gradually came away in due course. On the twenty-second day, she suddenly became very ill, and had a severe rigor. This was clearly due to the retention in the sac of the remains of the placenta, for she soon recovered her previous satisfactory state on my removing what putrid pieces had remained behind.

The case of tumour of the left kidney was in a gentleman whom I saw with Mr. Hogg. There had been a somewhat obscure history of renal colic six months previously, and the tumour was thought to be a hydronephrosis. The abdomen was opened outside the left rectus muscle, over the most prominent part of the tumour, which was about the size of a large orange. A trocar was then pushed into it, and about an ounce and a half of dark brown and reddish fluid escaped, with a few small broken-down clots. Insertion of the trocar gave to the hand the sensation as if the mass were nearly solid, or contained small loculi separated by thin dissepiments. The wound was closed, and the patient soon recovered. The tumour for a time afterwards seemed considerably smaller, and the patient regained his former ability for active exercise. It seems likely that, sooner or later, this case may require again to have surgical aid.

The treatment by operation of intestinal obstruction has, during the past year, been a good deal occupying the minds of practitioners, and is likely yet to be much further developed. It has been found, in many instances, when the case has passed the physician's hands, and is requiring surgical aid, that it is both useless and mischievous to make a long incision, and insert the whole hand into the abdomen among a large mass of distended coils, in search for the cause of obstruction, the relief of which is not then always practicable.

Recoveries after such procedures have been but few out of the large number attempted. It has of late been thought better practice to make a very small aperture, seize the first piece of distended intestine that presents itself, stitch it to the wound (of course, including the peritoneum), and then open it to give free exit to the retained feces. Of course, by thus opening the gut at a spot above the constriction, the obstruction, as such, is effectually relieved. The artificial anus is made, the constricted portion of gut is allowed to take care of itself, and in a good number of such cases the feces have, in course of time, varying in different cases, resumed their natural course, with the ultimate closure of the artificial opening in the abdominal wall.

The present series comprised one such laparo-ileotomy; it was a case in which ovariectomy had been performed a few years ago, and had for some few days been under the observation of the esteemed President of this Branch, and of Mr. R. W. Smith. I was called upon with a view to operation, and it was agreed that the best thing to do would be to open the gut above the constriction. This was easily done. Faecal vomiting occurred just as ether was being administered. Next morning, there had been no vomiting, and the patient looked quite comfortable; a most marked contrast to her condition just before operation. She did well for three weeks or so, regaining appetite, faces being passed in large amount *per anum*. She then gradually declined, dying, with symptoms of general asthenia, about five weeks after the operation.

It is a difficult matter to know the exact value of symptoms, taken singly, in the after-progress of patients with abdominal operations. The pulse and temperature cannot always be considered safe guides, for I have known instances of cases going wrong where little amiss was to be found with these. Distension, again, is apt to mislead; for there may be considerable distension, and yet nothing wrong with the peritoneum. This was very marked in the case of death from apoplexy after the hysterectomy. For some few hours before death, the abdomen was very much distended indeed; and Dr. Saundby reported, in his *post mortem* examination, that the peritoneum was healthy. It is not difficult to conceive relaxation of the muscular coat of the intestines coming on in a weakly, fat, or old woman, quite apart from peritonitis. The presence or absence of vomiting is very important, and so also is the tongue; but I have come to look upon the expression of the patient's countenance as, perhaps, the one single symptom which is most unfailing in its true tale of upward or downward progress.

In the after-treatment, the administration of aperients and of frequent enemata, either simple or turpentine, and the absence of opium or morphia, unless absolutely necessary, are all a marked contrast to what obtained a few years ago; and, although advances often come by methods of a purely empirical character, yet progress is made surely and gradually.

CLINICAL MEMORANDA.

EPILEPTIC CONVULSIONS, WITH UNUSUALLY SLOW ACTION OF THE HEART.

THE following case has come under my notice; and, as I have not been able to find published in the journals, or in the books at my command, an instance of such unusually slow action of the pulse, I have deemed it worthy of professional notice. A *post mortem* examination was, unfortunately, not permitted.

E. B., aged 28, a strong, muscular man, had served for a short time in the county police-force, and claimed his discharge two months ago, but not from any ill health. He had never received any injury to the head. He suffered from syphilis two and a half years previously to his death. On November 25th, whilst talking to a friend, he suddenly felt a violent pain shooting through the right side of the head towards the posterior part, and, during the act of exclaiming, fell down in a convulsive fit. He soon recovered consciousness, and returned home, but, not feeling very well, went to bed. During the night, vomiting came on, and soon afterwards another convulsion. The vomiting and convulsions were repeated frequently before I saw him, early on the morning of November 26th. I was informed that vomiting persisted after everything taken into the stomach, and retching continued after the stomach was empty. The tongue was clean; the bowels constipated; the pupils dilated, but acting to light. The *tache cérébrale* of Trousseau was marked; the countenance was pale; the ears were of a dull purplish colour, exhibiting dilated veins and capillaries; the pulse was 24 per minute. I was informed that complaint had frequently been made during the last two months of pain in the head. I had the bowels well opened with an aperient; but no medicine which I administered was able to arrest the vomiting. Accordingly, beef-tea enemata were given.

November 27th. He passed a very restless night. Vomiting and retching were less frequent. Convulsions occurred every few minutes, whether the patient were asleep or awake. A small quantity of urine which was passed yielded, on examination, no albumen nor sugar. The pulse in the morning was 14, in the evening 24; respirations 36. During my morning visit, an epileptic convulsion took place. Tonic and clonic spasms were present. On the return of consciousness, the face became suffused, and the patient asked where he was. I happened to be recording the pulse immediately prior to one of these fits, and observed that it was totally absent for fifteen seconds. During

the fit, it was exceedingly slow; but afterwards it beat for a few minutes with greater frequency, averaging 37, and gradually fell again to 24. On November 28th, the fits were still very frequent. He had retained a small quantity of fluid nourishment and medicine (iodide of potassium). The pulse in the morning was 37, in the evening 24; respirations 37. The patient died seven hours after the evening visit.

During this short illness, the patient made frequent complaints of want of air, asking for the windows and doors to be left wide open. Percussion of the head elicited pain in the inferior and superior postero-parietal regions, but not in other parts. Such pain, says Dr. Alexander Robertson, is often associated with disease of the skull, generally syphilitic. The congested state of the auricle, which showed up vividly in contrast with the pallid face, may have been symptomatic of some vascular excitement in the new growth, or of the cerebral membranes; and the *tache cérébrale* points to the same. The late Dr. Laycock, after a careful study of the symptomatology of the ear, came to the conclusion "that the states of the circulation, nutrition, and development of the tissues which make up the earlobe and cover the helix very commonly coincide with similar conditions of the encephalic tissues." (*Medical Times and Gazette*, 1862.) The local lesion upon which these well defined symptoms were dependent may be pretty accurately shadowed forth from a reflection upon the physiological phenomena. The cardiac centre was involved, bringing into play the inhibitory action of the pneumogastric nerve; the pulse registering at times only 14 per minute, and being absent altogether occasionally for fifteen seconds. The pupils were dilated, showing that the centre in the brain possessed of the power of producing this symptom was probably encroached upon, as was also the respiratory centre, the respirations being 37, whilst the pulse varied from 14 to 24. Death resulted when the "nœud vital" of Flourens was extensively involved. The history of syphilis leads us to suspect the gradual formation of a gummatous or hyperplastic neoplasm, and its situation evidently the floor of the fourth ventricle or its immediate neighbourhood. The case was seen with me by Mr. George Sankey, who confirmed the diagnosis.

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OBSTETRIC MEMORANDA.

CASE OF ANTEFLEXION OF UTERUS, COMPLICATED WITH PREGNANCY: INDUCED ABORTION: RECOVERY.

Mrs. D., multipara, was seen by me first about July 20th, 1883. I was sent for, as she had been vomiting incessantly for ten days. She had been under treatment for that time, but had obtained no relief. No food of any description would remain on her stomach, and even iced champagne was ejected at once.

When I saw her, the suspicion of pregnancy immediately crossed my mind. On inquiry, however, she said she did not think she was pregnant, but I found from her statements that she had not menstruated for two months. I therefore at once examined her, and found the following conditions. The uterus was very high up in the pelvis; in fact, I could scarcely reach the os uteri. This part I did not find otherwise displaced; it was considerably enlarged, congested, and tender, as seen by the speculum and felt with the finger. In front there was a rounded tumour, about the size of a turkey's egg, which I believed to be the fundus uteri, as it was freely movable with the os. I came to the conclusion that this was a case of anteflexion of the womb, probably complicated with pregnancy. I tried to replace it, but did not succeed. The patient told me that she had suffered for some time from dysuria and bearing-down pains. I prescribed bismuth, dilute hydrocyanic acid for the vomiting, and hot stupes over the hypogastrium to relieve the pain in that region of which she complained. On the 21st, there was no change in her condition. I ordered her oxalate of cerium in two-grain doses three times a day, and to have all her food iced. I also applied a blister to the epigastrium, which I had dressed with morphia. On the 22nd, I asked Surgeon-Major Robinson to see the case with me. He concurred in my opinion, and suggested hypodermic injections of morphia. She had a fourth of a grain three times for this day and the next, with no relief of the vomiting. On the 24th, in company with Dr. Robinson, I proposed to explore the uterus with a sound, and, if possible, to replace the womb in its normal position. She was then very weak, having had no nourishment for about fourteen days. She could not bear the pain, and the least movement brought on retching; we therefore had to desist. On July 25th, Dr. Robinson administered chloroform. I tried to pass a No. 8 gum-elastic catheter on the stilette into the uterus, but could only introduce about 1½