ON ONE HUNDRED AND FOUR ABDOMINAL SECTIONS PERFORMED DURING 1884.

Read before the Birmingham and Midland Counties Branch.

By THOMAS SAVAGE, M.D., M.R.C.P., F.R.C.S.,

Surgeon to the Birmingham and Midland Hospital for Women; Consulting Obstetric Physician to the Kidderminster Infirmary.

THE work in abdominal section undertaken by me during last year embraces a series of 104 operations, and these comprise all the cases which came under my immediate notice which I had the opportunity of operating upon. There has not been in the series the slightest attempt at selection of cases, such as choosing the most suitable, and rejecting those which did not seem to promise to be successful. Had there been such attempt, I should have had four deaths less to record, being deaths in patients upon whom I operated with the idea of giving them the slight chance of life which the operation afforded, knowing well beforehand how slight that chance was.

The following Analysis will show the Nature of the Cases.

For cystoma of ovary :	Recovered.	Died.
" " one ovary	17	2
" " both ovaries	3	—
" myoma of ovary	1	—
" parovarian tumour	4	—
" dermoid tumour	2	—
Appendages removed :		
For chronic ovariitis	16	—
" uterine myoma	11	—
" metrorrhagia	4	1
" hydrosalpinx	2	1
" pyosalpinx	4	—
Supravaginal hysterectomy	7	2
For extra-uterine foetation	2	—
" " acute peritonitis	1	1
Cholecystotomy for gall-stones	1	—
For tumour of kidney	1	—
Laparo-enterotomy for obstruction	1	1
For papilloma of peritoneum	1	—
" retroperitoneal abscess	1	1
" pelvic peritonitis	6	—
" hæmatocele (opened and drained)	2	—
" pelvic abscess	4	—
" cyst of omentum	1	—
" strangulated umbilical hernia	2	—
" radical cure of	1	—
Exploratory operations :		
For uterine myoma	3	—
" malignant tumour	3	—
" neuralgia	1	—
Total	104	9

The Nine Deaths may be Analysed as follows :—

Nature of Case.	Cause of Death.
1. Cystoma (large)	Septicæmia
2. Hydrosalpinx	"
3. Supravaginal hysterectomy	"
4. Cystoma (large)	Asthénia
5. Acute peritonitis	"
6. Intestinal obstruction	"
7. Retroperitoneal abscess	"
8. Metrorrhagia	Tetanus
9. Supravaginal hysterectomy	Granular kidneys.

Two of the above deaths followed removal of cystoma. In one, the operation was performed as a last resource. It was scarcely thought possible for the patient to recover; she was bringing up nearly black vomit at the time of admission into hospital, and her tongue was quite dry and brown. She died on the eleventh day. Her abdominal symptoms appeared to be quite normal throughout the time from operation to death. As she appeared to be dying from asthenia, I tried, at the suggestion of Dr. Taylor, the application of Franklinic electricity, in the form of a bath, by insulating the bed in which she lay, but I am not prepared to say that it did her any good. Had the operation been done months before, I am certain she would have recovered.

The other case, done at a private house, I drained, and the patient was quite well forty-eight hours after. The next day vomiting came on, and she died of septicæmia. Here I have a strong impression that if she had been operated upon in the women's, or my own private hospital, where she would have been constantly under observation, and have had the drainage-tube frequently seen to, the result might have been different. The tube not unfrequently becomes stopped up, and septic symptoms will soon develop, which will as rapidly subside if the tube be promptly and properly attended to.

In the case of hydrosalpinx, death occurred from septicæmia on the fifth day; the appendages were very adherent, and drainage was used. In the case of metrorrhagia, the appendages were removed, and the patient ate some fowl on the sixth day, soon after which tetanus set in, which ended fatally in less than forty-eight hours. In the two cases of hysterectomy, death occurred in one of them from granular kidney; she had a very large myoma. In the other patient, also with a large tumour, septicæmia was the cause. I regret I did not drain here. The case of acute peritonitis was an urgent one, with a perfect history of ruptured tubal gestation. The tube was found ruptured; it was easily tied, and the abdomen cleaned out; but death occurred about thirty-six hours after operation. In the enterotomy, obstruction of the bowels had existed for nearly a week. The first piece of distended gut was opened and stitched to the wound, but death followed in a little over twenty-four hours afterwards, the vomiting never having ceased. The patient with retroperitoneal abscess was in the last stage of hectic at the time of operation, and lived only about four hours after I opened the sac and inserted a drainage-tube.

Another year's work strongly confirms me in the view I have long held, in common with many others, namely, the great importance of operating early, rather than waiting until the case becomes urgent. I can see that, even now, although so much has been said on the subject, some practitioners seem to act on the principle of not advising their patients to submit to operation until the case has become very urgent, and the prospects of recovery, therefore, the more remote.

A wave of so-called good or bad luck will seriously influence the percentage of fatal cases in a given year; and one hundred is much too small a number from which to deduce very much valuable information. Much less can be gained from a smaller series, for I find that, in August and September, I had twenty-six consecutive operations which recovered, and these included some of the worst and most difficult cases of the whole. Other operators have had the same experience; hence the fallacy of relying too much on figures, which, as has been well said, can be made to prove anything; and this, especially with such a variety of conditions, good or bad, as are to be met with in 104 operations taken as they come. It seems to me that mortality after abdominal operations will always be a more or less variable quantity, ranging within the limits of 3 per cent. as a minimum, and 10 per cent., or a little more, as a maximum. This range will be influenced by the skill or experience of the operator on the one hand, and by a wave of good or bad cases, in a given period or a given number, on the other.

I have been using drainage with greater frequency of late than formerly. Why? I can only answer that I do so to make a good result more probable. I say to myself, "Drainage will do no harm; it may make the difference between recovery and death." I do not think that the alleged after-weakness of the cicatrix need be taken as a factor in the consideration. I myself cannot say that I have observed this special weakness. I am more and more convinced of the necessity of skilled and intelligent attention to the drainage-tube. One of the cases of pyosalpinx was very ill two or three days after operation, with vomiting and some amount of distension, and the fluid in the tube had almost ceased; but, after a little manipulation, a clot came up, the fluid increased in quantity, and, coincidentally, the symptoms subsided. The same was observed in one of the ovarian tumour cases.

As mentioned above, I thought that a different result might have been obtained in one of the cases of cystoma, if a longer tube had been used, and skilled attention had been paid to it. By "skilled," of course I mean only that management of the tube which frequent use of it alone can give.

I think the glass tubes usually sold are too short for the generality of cases; and especially is this so in patients with a deep pelvis, or a fat abdominal wall. Some of the tubes I use are eight inches in length. If I am in any doubt about the abdomen being kept "clean and dry," I have not hesitated to use two tubes on several occasions, applied as follows: one into the pelvis, and another into the sac or cyst, if it required to be drained; or, one tube into the pelvis, deep down, and the other into the abdomen, higher up, where I thought oozing might occur, and not be able to reach the lower tube.

Besides the presence of a blood-clot blocking up the tube and preventing the outlet of serum from the pelvis, I have met with three instances where a small piece of omentum has been sucked by the syringe through the holes in the tube, and made it rather a difficult matter to extract the tube for cleansing purposes.

Increasing experience in cases of pyosalpinx seems to confirm the following conclusions. 1. It may be often diagnosed with accuracy beforehand. 2. One of its most frequent antecedents, as a cause, is gonorrhœa. 3. Operation by abdominal section is the best treatment.

4. Failing operation, the termination will be one of the following : (a) fatal rupture into the abdominal cavity ; of this, I know of at least two instances ; (b) escape of the pus *per vaginam* ; (c) inspissation of the pus in the tubes, with some relief, but not complete cessation of the pain, and subsequent chronic invalidism. A few years ago, there were practitioners who threw some doubts upon the existence of this condition as occurring with anything like frequency, and also upon the propriety of operation as suitable treatment. With the mass of evidence which has been, and is being, brought before the profession, I imagine such doubts are now quite dispelled.

During the last two years, I have had two cases in which, after removal of the appendages on each side, a large hæmatocele has formed, giving rise to very serious symptoms, with every reason to expect a fatal issue. Here I have not hesitated to make a second abdominal section in the third week, let out the blood and pus, and insert a drainage-tube. Such cases illustrate the advantages that accrue to both patient and doctor, in the former being immediately under the constant observation of the latter, as in either a public or a private hospital. In each case, the necessity for opening the abdomen a second time would not have been apparent to me a few years ago.

In one of the extra-uterine fetations, the patient had gone two months past the estimated time for her confinement, and was daily becoming very seriously ill. She had had a spurious labour, with milk, etc. She had ceased to feel the movements of the child, and she was smaller in size. The cyst, when opened, was found to be non-adherent to the abdominal wall, and the rent in it was made very close to the uterus. Here I deemed it prudent to insert a drainage-tube into the pelvis, by the side of the uterus. In the other case, there was a perfect history of early pregnancy ; sudden pain after a fright, followed by acute symptoms ; and the presence, when I first saw her a few weeks afterwards, of a tumour outside the uterus, with pain and metrorrhagia. At the operation, an universally adherent cyst was found springing from the left Fallopian tube, full of black clots. The ovum could not be found. In the third case, which was fatal, there was also a very clear history of early pregnancy. After great exertion on a Friday, sudden pain came on at noon, with subsequent symptoms of peritonitis. I saw her at 6 P.M. on Sunday, and it was decided at once to operate. The abdomen was full of blood, and the right Fallopian tube was torn. This was tied, and as complete a *toilette du péritoine* was made as possible. She, however, sank, as before stated, in about thirty-six hours.

For hysterectomy, with my present views and experience, I would advise a drainage-tube being placed above the clamp, if there be the least reason to expect oozing downwards into the pelvis. Recently I had two cases on two successive days ; one was removal of very adherent appendages, which had to be picked out bit by bit ; the other was a hysterectomy, which was very simple, with a good stump, which was easily clamped with a *serre-nœud*. In the first, there was necessarily a considerable amount of blood during the operation, and much sponging was required. Drainage was used, and, in forty-eight hours afterwards, very little fluid having been drawn up, the tube was removed. In the hysterectomy, the pelvis, at the operation, was perfectly dry, and no abrasion or raw surface was made in the abdominal cavity ; and yet, for the first forty-eight hours after operation, nearly pure blood continued to be drawn up. But for the drainage, this woman would probably have died. The blood may have occurred from exudation into the pelvis, the result of excessive blood-pressure in consequence of the removal of a large tumour, similar to the metrostaxis after ovariectomy ; or, it is just possible, the wire of the clamp may not have been entirely free outside the peritoneal portion of the wound, and so have allowed some blood to drain downwards into the pelvis. Before finally tightening up the clamp, it may, in some cases, be a good thing to partially enucleate some portions of a myoma, which would otherwise contribute to form a largish stump. This proceeding would lessen tension and make a smaller stump, and, therefore, a less wound to heal afterwards. But it might, on the other hand, give rise to bleeding subsequently, and also to a too early separation of the clamp in consequence of compressing a smaller amount of tissue. In two cases of this series, the wire separated on the third and fourth days respectively. Both did well, but it seemed to be dreadful to contemplate that a very thin layer of lymph, and that necessarily of a slender nature, intervened between the patient and almost certain death, in the event of a strain, as during vomiting, coughing, laughing, or defæcation causing it to give way.

In referring again to the fatal cases, I think we ought to get into our minds, as a prominent idea, the view that, after an abdominal section, a death should be considered, to a very large extent, as preventable ; and that, when one does occur, we should hold with ourselves a sort of moral inquest as to the cause : how it might have been

prevented, and whether, in any way, it was associated with aught relating to ourselves. As time goes on, I am the more persuaded that, in the question of success or failure, less and less depends upon the patient, her condition and surroundings ; and more and more upon ourselves, and the attention to certain details which have been found to be essential.

Of the deaths, the three from septicæmia are those which gave me the greatest pain ; because I ask myself, "Could they have been prevented ?" Three of those put down to asthenia are to be regretted, because it seemed most likely that the result would have been different if it had been possible for the operation to have been done earlier. I would respectfully urge my colleagues in general practice, who so often see tumours and abdominal and pelvic diseases first of all, to advise their patients to submit to operation early, and before difficulties, and therefore dangers, arise, as they assuredly tend to do by delay.

We are learning, if we have not already learnt, to look on acute peritonitis as a symptom of some organic change, and not as a disease in itself. And this is well for our patients, because operative measures can do much for it. We shall, ere long, regard so-called "idiopathic peritonitis" almost as a curiosity.

To obtain success in abdominal section, the conclusion of another year's work impresses upon me more and more forcibly the importance of ensuring that the peritoneum shall be kept "clean and dry." There must be in many cases a certain amount of oozing, which will become absorbed ; and I always feel happier when I think there will be little or none. But much more dangerous than this are the small escapes, during the operation, of fluid or blood, if allowed to be left behind. I think I am more particular than formerly in my sponging. A sponge deep down in Douglas's space before adhesions are separated, and blood escapes, will catch some fluid which might escape extraction afterwards. I also endeavour to press, as I proceed, a sponge or sponges into the bed out of which I have picked adherent tumours. The sponge soaks up what is effused, and, by its pressure, tends to restrain further effusion. One principal advantage from washing out the pelvis with warm water, arises from the property that the water has of floating the small clots from the deep recesses up to the surface.

I am never afraid of my sponges ; I attend to them myself, and so I know the life-history, as it were, of every one of them, from the moment they leave the shop where I purchase them, until they do service in an abdominal cavity.

In the interesting and able address of our esteemed President last year, reference was made to the desirability of following up our cases after their return home, and so being able to summarise the results after a more or less long period of time has elapsed. This appears to me to be greatly to be desired ; but, at the same time, it is very difficult to accomplish. Patients, both hospital and private, go away, and in very many instances it is impossible to trace them.

ABSTRACT OF AN ADDRESS ON ONE THOUSAND ABDOMINAL SECTIONS.

Delivered before the Midland Medical Society.

By LAWSON TAIT, F.R.C.S. Eng. and Edin.,
Surgeon to the Birmingham and Midland Hospital for Women.

MR. LAWSON TAIT has recently communicated to the Midland Medical Society a record of one thousand operations of the class generally known as abdominal section. He excludes, in accordance with a common definition, a few operations on the kidney, and two cases of removal of extraperitoneal cysts, and includes herniotomy for umbilical rupture ; so that, in all the cases in his series, the peritoneum was opened. He objects to ether as an anæsthetic, believing it to be unsafe for patients with diseased kidneys, and a frequent cause of severe bronchitis, which in one case proved fatal. He prefers to employ a mixture of two parts of ether and one part of chloroform, given by means of Clover's apparatus ; this mixture is now administered by his anæsthetist, Dr. Annie Clarke, with excellent results.

The following statistics show the nature of the operations included in the series of 1,000 abdominal sections, and the relative mortality. Exploratory incisions, 94, 2 deaths. Removal of : parovarian cysts, 65, 2 deaths ; cysts of one ovary, 239, 26 deaths ; cysts of both ovaries, 101, 5 deaths ; appendages, for myoma, 99, 7 deaths ; ditto, for inflammatory disease, 201, 10 deaths ; ditto, for epilepsy, 6, no deaths ; ditto, for deformity, 1, no death. Hysterectomy, 54, 19 deaths. Opening for draining pelvic abscesses, 30, no deaths ; ditto,