A LECTURE ON THE LINES OF ADVANCE IN ABDOMINAL SURGERY.

Being the Second Hunterian Society Lecture for the Session 1895-96.

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AFTER some introductory remarks, Mr. Knowsley Thornton said: Thanks to Lister's indomitable perseverance and courage (inspired much as I know from John Hunter's writings), and to the faithful disciples of many lands who have striven to follow his teaching, and spread through the wide world its benefits, we stand to-day in a position to say that the one dread enemy of progress in surgery is conquered; we can at any rate, if we will, in the great majority of cases which require our aid, by the use of antiseptics keep asepsis; and even in the smaller class of cases, septic before they seek our help, we can do much to purify. The time will surely come when the most septic case will yield to germicides as potent, or more potent, than our old friend carbolic acid, and our more recent ally corrosive sublimate, but less irritating and poisonous to our patients and ourselves. We look with anxious eyes to the laboratories of the chemist and the bacteriologist. May we not hope that pre-existent sepsis will some day be defeated from within instead of by the cruder and more painful method of external application? There must be remedies which will so strengthen the vitality, the resisting power of our tissues, that the bacilli shall only have a local habitation, and shall have no power of spreading into surrounding fluid and solid tissues when once the surgeon has cleared away the diseased parts. Cannot the scientific physician help us?

Meantime, while we wait on the discoveries of the laboratory and the consulting room we need not be idle, for there is much still for the surgeon to do which he can do himself unaided. To the what there is to do and the way to do it I propose to address myself this evening, and if I but succeed in sowing some seeds that shall bear fruit in other brains and hands to the advance of our science and our art, I may feel that I have trod, howbeit feebly, in the footprints of John Hunter.

I shall take the organs in or immediately behind the abdominal cavity separately, and point out the directions in which I think improvements and advances are possible, and how my own experience leads me to think they can best be brought into practice, illustrating my suggestions by brief references to a few striking cases.

THE LIVER AND GALL BLADDER.

Under this head we have to consider (1) operations upon the liver itself; (2) operations upon the gall bladder and its ducts. The structure of the liver would not lead one to expect that it would be amenable to any surgical interference, but practice often disagrees with theory, and it is so here. The liver bears well the knife, the trocar, and the suture, and bleeding from its wounded surface is readily stopped by slight soft pressure, or by bringing its injured surfaces gently together, or into contact with some other surface by fine sutures.

Hepatotomy, or cutting into the liver, is now frequently and successfully practised for hydatids, simple cysts, and suppuration. The neoplasms of the organ, whether primary or secondary, are almost always malignant, so that they do not afford scope for surgery; but in the event of a simple tumour being found in this organ, I have no doubt that with care it could be successfully removed by lightly packing the cavity for a time with antiseptic gauze. Lindemann in 1871 first brought hepatotomy for hydatids within the range of practice, stumbling into it, a process which has been so fertile in great advances, not only in surgery, but in many scientific discoveries. In 1873, Tait deliberately followed his lead, and in a succession of cases established the operation.

Let us hope that all the old unsurgical gropings, by puncture, by aspiration, by cautery, and thermo-cautery, and by incision *à deux temps*, are dead and buried, along with their many victims. There are few surgical procedures which mark a greater advance than the immediate opening, by incision after abdominal section, of hepatic abscesses. The mortality before this advance was made was unquestionably very great, and now in competent hands is very small. The difficulty in diagnosing and correctly localising the abscess still rather blocks the way, and the fact that healthy liver tissue commonly overlies the pus cavity, and has to be cut through to reach it, makes even the exploratory abdominal section not in all cases such a sure aid to diagnosis as one would expect it to be. Perhaps Roentgen's marvellous discovery will aid us here. A photograph of the liver, taken through the adipose abdominal parietes of an elderly gentleman, sounds absurdly impossible, but who shall say that it is not within the range of accomplishment in the near future?

The multiple nature of hepatic abscess has been one great bar to its successful treatment; but the tendency is for the multiple to coalesce into the single, and the process is aided by opening and draining the main cavity, and, as I can vouch by practical experience, secondary collections can be found both by sight and touch, and opened into the main cavity in the course of the primary operation. I may recall a curious case of my own already published to illustrate the necessity for readiness in resource if one is to be a successful operator. I had gone into the country to operate upon a gentleman dangerously ill with hepatic abscess, which had been explored and localised by puncture behind in an intercostal space. I rashly, as it proved, concluded that, though the puncture had been made in a possible situation for a low pleura, there must be adhesion, or disaster would have followed the puncture, and, proceeding to cut cautiously down upon the abscess between the ribs, I found myself in the bottom of a healthy pleura. A few minutes' consideration suggested a method of escape for myself and safety for the patient, with cure of his abscess. I gently incised the visceral layer of the pleura, raised its edges all round, did the same for the parietal pleura, and sutured the free edges of the two accurately together. By this means the danger of an opening into the pleura from the outer air was at once closed, and I had a safe channel through which to open and drain the abscess. The patient made a rapid and perfect recovery. It might be said, Why, with this case in view, do you not advocate a similar fixing of the liver to the parietal peritoneum before risking the evacuation of pus through the peritoneal cavity? Well, theoretically this method has much to recommend it; but in practice it is not so satisfactory, because the changes in the position of parts brought about by differences in the intestinal contents render such a union difficult, and are apt to lead to inconvenient drag upon the liver. Moreover, practical experience shows that the abscess may be safely opened and drained through the peritoneum without such possibly harmful fixing of the liver, always provided that the case has come untouched to the surgeon, without any preliminary puncturing, to run the risk of septic inoculation of the pus. I have only once lost a case of hepatotomy, and that was in the early days of these operations and in a case of suppurating hydatids, the patient being already half dead of septicaemia. She had undergone preliminary exploration with a trocar before she came under my care. I firmly believe that with an improved early diagnosis and prompt operation no case of abscess of the liver need in the future be fatal or seriously damage the health of the patient.

The key of the whole position as to advance in abdominal surgery has been reached when allusion is made to improved diagnosis; and just as a statesman once gave advice to his followers in the simple reiteration of the word "Organise, organise, organise," so I would say to those intending to work out improvements in abdominal surgery, "Diagnose, diagnose, diagnose." As I have already said, the mere performance of operations is easy enough with our present resources and knowledge if we can only know beforehand exactly what we have to do.

When we turn from the liver itself to the gall bladder and its ducts we find again that we are often at fault in diagnosis,

the difficulty being in many cases to distinguish obstructions due to impacted stones or to damage done to the ducts during the passage of stones, from obstructions due to pressure from disease in neighbouring organs, generally of a malignant kind. It is all very well to say, Make an abdominal incision and explore when in doubt, but even this rough method does not always help us, for the matting and disorder of parts may be so great that it is impossible to make out what is the matter, even after opening the abdomen, and we close it no wiser than before. I believe there is much still to be done in differential diagnosis by a more careful watching and recording of typical cases. How much has been done by the surgeon in the last few years will be apparent when I merely name the operations now commonly practised, and giving in the great majority of cases relief in a most painful and health-destroying class of diseases. Thus we have cholecystotomy for gall stones, for suppurations, for hydatids, and for new growths. Cholecystectomy for cases in which the previously named operation seems insufficient, choledochotomy for the cutting out of a stone impacted in the common duct, an operation first performed deliberately by myself on June 2nd, 1889, and christened at the same time, thus first showing the ease and safety with which this apparently difficult and dangerous procedure could be performed, and with quick healing of the duct wound.

Needling and crushing of the calculi *in situ* in the duct without opening it, leaving the fragments to find their own way into the duodenum, is also an operation which I successfully practised in several of my early cases, and this procedure has not received the attention it deserves as a distinct advance in our means of treating an extremely painful and dangerous class of cases. I am not quite prepared to accept as a rule of practice the suggestion of Treves that we should leave the impacted stone in the duct, and merely suture the gall bladder to the parietes, and drain it for weeks or months till the stone disintegrates and comes away. Entero-cholecystotomy suggested by Winiwarter, and improved by Gaston and Colzi, is rather a valuable aid to surgical failure than an advance in surgery; it is an operation for establishing a fistulous communication between the gall bladder and intestine, when from obstruction of either the cystic duct or the common duct a fistulous opening remains in the abdominal wall after cholecystotomy or accidental perforation. It is obviously valuable, and the only resource in incurable obstruction of the common duct, but I should prefer a cholecystectomy if only the cystic duct is obstructed, the cases in which I have entirely removed the gall bladder seeming in no way to suffer from its loss, and the operative procedure being simple.

THE SPLEEN.

The surgery of the spleen is of a limited description, and though I was fortunate enough to be in 1884 one of the few surgeons who had successfully removed it, the first in England, I formed a very unfavourable opinion of the chances of immediate success in splenectomy, and also as to the future health of the patient. In two other cases operated upon I lost the patients from a quite uncontrollable general oozing from every surface which had been divided with the knife, the greatest loss of blood being from the sides of the incision in the abdominal wall. It began very soon after the pedicle was tied, and nothing had the smallest effect upon it. I had once before seen a similar hæmorrhage in a case operated upon by Sir Spencer Wells. His patient bled to death very rapidly; mine lived only seven and eighteen hours respectively. The horror of watching deaths of this kind, which one was powerless to prevent, has ever since deterred me from again performing the operation. Then to this fear of immediate failure was added the doubt as to any real gain to the future health of the patient. My own successful case died of a sort of consumption, or general wasting, about four years after the operation, having been always ailing; and I know of no successful case of which we have a history of health, or of any reasonably prolonged life after operation. The recent remarkable immediate successes of Bland Sutton must make me question whether my view as to the immediate danger of the operation is a sound one, but we must wait for the after-history of his cases in future years before we are in a position to judge of the real value of the operation.

While I am not very sanguine as to the future of splenec-

tomy, at any rate in cases in which hypertrophy or solid tumours are the causes for its removal, I see no reason why this organ should not be amenable to ordinary surgical treatment in cases of injury, abscess, hydatid, and simple cyst. I doubt if it is justifiable to remove a wandering spleen unless it is also diseased, and I see no reason why it should not be fixed as we now fix a too mobile kidney. In any case I doubt the surgery of this organ finding in the future a prominent place in the advances made in abdominal surgery.

THE PANCREAS.

The pancreas is another organ in this part of the abdomen which is interesting rather from the diagnostic than the surgical point of view. Practical experience has shown that it may be treated like any other abdominal organ when affected by such diseases as cyst, hydatid, or abscess. I have myself on several occasions had to deal with extensive wounds, both of its surface and deeper parts, in separating it from renal and other tumours, and have found it bear the ligature and the suture well without its injury and repair affecting the satisfactory progress of the patient. It is chiefly, however, of interest to the surgeon from the important part it plays, especially when attacked by malignant disease, in obstructing the common bile duct, and there is undoubtedly room for advance in our knowledge both in deciding that disease is present in it, and also in differentiating the particular lesion.

THE ALIMENTARY CANAL.

I now pass to the consideration of the surgical treatment of the diseases and injuries affecting the stomach and intestines, and I believe that this is the field in which there is most room for advance, both in accuracy of diagnosis and in the details of successful operation.

I shall first take into consideration accidents which may occur to any part of the alimentary canal, and for which the treatment is the same in its whole course, and then consider separately the special regions. The continuity of this canal may be broken with escape of its contents into the surrounding peritoneal cavity by accidental crush, or by violent concussion rupturing it, by stab with a knife or other cutting instrument, by perforation by shot or bullet, by wound from the tooth, claw, or horn of a wild animal, by ulceration and perforation from within its cavity, or by ulcerative or suppurative perforation from without, this latter case being different from all the others because the perforation does not necessarily lead to escape of its contents into the peritoneum, but only into the abscess cavity, or into some other hollow viscus.

I suppose it will be admitted that with our present knowledge, and excluding this last group, the proper treatment in any of the accidents or diseases I have enumerated, is at once to open the abdomen, carefully search for the wound or perforation, accurately suture the opening or openings, and thoroughly flush out the peritoneum with a large quantity of boiled water, or some non-irritating and non-poisonous antiseptic solution, and drain the pelvis with a Keith's glass tube. I do not enter into the details of such operations; that is outside my present purpose, which is to indicate broadly by reference to what has been done, the lines along which we must travel to assure greater success in what we do, and greater accuracy both in planning and in carrying out our operative procedures.

I do not think there is much room for new departures; if we can only perfect diagnosis and the details of all that we now attempt, abdominal surgery will stand as one of the most complete and remarkable achievements of this rapidly ebbing nineteenth century. The removal of foreign bodies from the stomach or intestine with careful suture of the wound—operations which I may illustrate by the case in which I removed an enormous mass of hair from the stomach of a girl in 1884, with rapid and perfect recovery, the largest foreign body which has ever been removed from this organ; and by the remarkably successful extrusion, *per vias naturales*, of a large gall stone which had stuck in the ileum and was causing acute obstruction, recorded in the *Transactions* of the Clinical Society, vol. xxi, p. 99, by Clutton; this case being chosen as an illustration of what may be done and has been done, both on account of the age of the patient—70—and the surround-

ings in which the operation was performed in the middle of the night. The diagnosis was accurately made by Sidney Harvey. Clutton was sent for, opened the abdomen, found the gall stone wedged in the ileum, gently manipulated it onwards through the ileo-cæcal valve into the cæcum, where he left it, to be passed *per anum* five days after the operation, with the old lady's complete recovery.

One remark only with regard to wounds or perforations of the intestinal canal, howsoever caused: Do not wait for symptoms, when you can make a reasonably sure diagnosis, or, indeed, for anything except knives, needles, and silk, all of which can be rapidly sterilised by steam or boiling, and a supply of boiled water. Then directly the first collapse passes off get to work; if you allow time for inflammatory sticking of the escaped contents of the canal to the peritoneal surfaces, your chances of getting the parts clean by washing—surgically clean—are gone or desperately diminished, and so is the likelihood of your saving your patient. Also be careful to keep all the external surfaces of your patient warmly wrapped up and covered, and have only the smallest possible abdominal surface uncovered, and do your work of search, of repair, and of cleansing, methodically and as quickly as is consistent with thoroughness, the latter especially applying to the suturing. A decided recent advance in intestinal surgery has been made in the increased attention paid to the surroundings of the patient, to the fortifying of the patient's vitality by warmth, by stimulating hypodermics, etc.

We pass now to the consideration of a still more important group of intestinal cases—more important because more numerous, and even more difficult for accurate differential diagnosis—acute and chronic obstruction. So far we have been able to consider the canal as a whole; now we must divide it into regions. Obstructions to the entrance of food into the stomach may be caused by simple or by malignant stricture of the œsophagus, or by pressure upon it of an unnatural enlargement of some neighbouring tissue or organ. When this obstruction is so nearly complete as to prevent the passage into the stomach of sufficient nourishment to maintain life we perform gastrotomy—that is, we fasten the stomach to the parietes, and make an opening into it through which the patient can be fed. It sounds a simple proceeding, and is, thanks to the antiseptic methods now in common use, a fairly successful one; and yet, to our shame be it said, it is only quite recently so. It is less than sixty years ago that it first occurred to a Norwegian surgeon to suggest such a procedure. Then came a period of forty years of neglect and failure. Just think of the horror of such a death—slow starvation, the famished frame too often also racked with the pain of malignant disease. When I was a medical student I saw a friend so die, and I well remember how the feebleness of my favourite branch of work, as evidenced by its inability to give relief in this case, depressed me. And yet I much question whether any large number of the members of our profession could even now so perform this operation as to bring it to a successful issue. All the surroundings of the operation will still well repay the careful study of the coming surgeons. Much light is still wanted as to its limitations, especially in malignant disease.

The next form of obstruction which claims our notice is that which prevents the escape of the contents of the stomach into the bowel; this again may be caused by simple or malignant stricture, or by pressure from without, and it may be dealt with in a variety of ways according to the nature of the obstruction. The operations performed in this region, especially those for malignant disease, undoubtedly add much credit to the surgical record of our time, and will remain as landmarks of the courage, perseverance, and manipulative skill of the operators; some of them are also examples of what the human frame can endure and recover from. I am not so sure that they have really advanced our capability materially, either in the relief of suffering or in the prolongation of life, nor is it to the perfecting of such heroic procedures that I look for future permanent advance in abdominal surgery. Merely to mention two of them, I think that there is a more useful future for gastro-enterostomy than for pylorotomy; at present the former operation has been rather reserved for cases in which the latter was impossible, hence it has been performed late and in specially severe cases. I think if it were performed earlier it would be more successful

and would give much relief to suffering. But what we want is not brilliant operations, but careful observation of the signs and symptoms which can tell us, when to operate and when to hold our hands. In these days of anæsthesia, of antiseptics, and of widely-spread knowledge of the technical details of our art, there will never be wanting brilliant operators. Thoughtful and scientific surgeons are not by any means so common—men who will patiently watch and wait, and above all observe and compare, and who will not treasure up for themselves alone the knowledge so acquired, but record it accurately for the guidance of others. It is again, you see, Diagnose, diagnose, diagnose! and in no class of cases is the necessity greater, and the certainty of future advance by improvement in this direction more clear than in the varieties of intestinal obstruction of all kinds, and howsoever caused. Take, for example, the not uncommon form of acute obstruction by band, or opening in a membrane, under or into which a piece of bowel slips and becomes strangulated. If we could only diagnose such cases at once, the operation for their relief would be among the most successful in abdominal surgery—a mere abdominal section, careful search for the obstructing element, simple division of a band, or division of the tense edge of a ring opening say in the omentum, with its subsequent closure by suture, and all danger is over. I say the above might be the course of events if we could only lay down clear rules for an early diagnosis, but in how many cases is the end very different.

I will give an illustration from my own experience. A nice little lad, healthy and strong, and full of vitality, suddenly becomes a little quiet and depressed, then complains of a little stomachache, and then is a little sick; he gets the inevitable dose of some aperient, and only when this makes him worse is the ordinary medical attendant called in; he has had experience, does not quite like the look of things, and a consulting physician joins him, and they decide on one more little dose and an enema; the only result is acute obstruction with tumid belly, fever, and other symptoms of dangerous illness. I am called in haste, decide that the case is urgent and grave. The abdomen is opened, and the band which had been suspected to be present found; it is cautiously divided, and as the tension is relieved the gut, already gangrenous under it, gives way, and faecal extravasation takes place; a prolonged operation is necessary to repair the damage and to cleanse the peritoneum, and by the time all is put right it is pretty clear that the poor little chap will not have strength to rally, and in a few hours it is over. Operation immediately the symptoms of obstruction were clear would probably have been successful.

I am sure that in the case of young subjects early exploration should be the rule; if carefully performed it does no harm, and at any rate in the vast majority of cases it gives at once a certain diagnosis, while it at the same time leaves an open field for the necessary further treatment. I am not sure that experience does not lead me to the same decision in acute obstruction in the adult. How many such cases recover spontaneously? There can be no doubt that a number of carefully conducted early explorations will greatly advance our knowledge of acute obstruction. The careful researches of Treves show how hopeless it is, from the great variety in the topographical anatomy of individuals, to hope to localise intestinal troubles. In chronic obstruction in adults the case is different; here we are frequently rewarded for watching and waiting, and recovery takes place so completely under such apparently unfavourable conditions, that it is much more difficult to decide when it is necessary to give surgical aid. An accurate diagnosis of the cause of obstruction is our only safe guide.

One thing, it seems to me, stands out in bold relief as the result of all experience in the treatment of acute obstruction of the bowels—never give a purgative; and yet it is quite the exception to be called to a case which has not already been dosed; probably not one case in twenty escapes. It is equally rare to find a case which has been treated by emetics or by clearance of the stomach by tube and syringe; and yet I believe this treatment would be in all cases beneficial. Large injections of warm olive oil *per anum* are also, I think, likely to do good. It must be better to clear away retained matters from both sides of the obstruction, and thus relieve the tension and stop large formations of gas, due to intestinal

decomposition. I have not time to dwell upon the many other operations which are now in common use for the relief of diseases of the bowel; much has been done of late to improve their technique and to advance our knowledge as to which of them is most suitable for particular cases, but there is still room for advance—notably, in the exact symptoms which indicate chronic trouble in the vermiform appendix, and the definite symptoms of danger which justify resort to operation during the quiescent stage. I am inclined to think that there is just at present too great an inclination for operative treatment. The results of operative treatment, apart from the mere immediate dangers of operation, are not always quite so perfect, as one might suppose from the language of its advocates.

The methods for uniting the divided ends of the intestinal canal, after resection of a portion of its whole circumference, have recently been much worked at, the exceedingly ingenious method of the late Professor Maunsell and the Murphy button being the two suggestions which have attracted most attention. I should certainly give the palm as a scientific surgical procedure to Maunsell's suture, but it has one feature which rather detracts from its surgical completeness, and that is the leaving of the knots of the sutures inside the canal. This must always be a source of some risk, but it does not seem to me to be nearly so great a defect, or so great a risk, as the leaving of a foreign body like the button in the canal; and there is to my mind a still greater objection to the method of union by the button in that it necessitates the death of a little ring of tissue, and that ulcerating off inside a tube like the bowel must be a great risk, for the sloughing may extend beyond the compressed surface, and even the absorption or casting off of this little ring of dead tissue in actual contact with the intestinal contents cannot but be an occasional cause of septic absorption. All these new departures—the decalcified bone tubes, the various kinds of button, and the improved methods of suture, are evidences of healthy activity, and one cannot doubt that the outcome will be a really reliable and safe method; and nothing can be conceived which can do more than such a method to improve the results of intestinal surgery.

Relief of suffering and the prolongation of useful life are the great aims of both medicine and surgery. We have yet to learn, by a study of the after-history of cases which recover from the actual operations, how far one or both of these ends is reached by operations involving removal of smaller or larger portions of the alimentary canal for growths of a malignant nature. For long such cases were regarded as beyond the reach of curative operation, the only questions being, When is it necessary to give relief by the formation of an artificial anus, and where shall it be made? This relieved suffering and prolonged life, and useful life too in many cases. Will the more heroic proceedings of our day do more? Time alone can tell, but meantime we can at least labour to make the mere operative procedures reasonably safe and technically perfect.

THE UTERUS, OVARIES, AND FALLOPIAN TUBES.

I now pass to the consideration of operations upon the uterus, the ovaries, and the Fallopian tubes. I will say at once that I have but little sympathy with the most recent development of uterine surgery. I refer to the various surgical procedures proposed and practised, for holding up of the displaced uterus. Possibly in a few extreme cases it may be justifiable to perform such an operation, though the ultimate result, even if the risks of operation are avoided, is not by any means certain to be a permanent cure. I believe, however, that the cases are very rare in which such a proceeding is necessary, nearly all cases being curable by less dangerous methods of treatment. I do not look upon such operations as an advance; they are a mere confession of impotence on the part of the operator. Careful attention to the general health of the patient, and medicinal remedies to restore tone to the uterus and broad ligament, aided, it may be, for a time by a simple vaginal support, will in 99 cases out of 100 do all that is necessary. Alexander's operation was a scientific conception, but its practical dangers and its frequent ultimate failure outweighed its possible benefits. Fixing the uterus or the broad ligament

to the anterior parietal peritoneum is a proceeding against Nature. I have heard it compared to the fixing of a wandering kidney. The comparison will not hold for a moment. The uterus is a mobile organ, and is intended to be so. The kidney is a fixed organ, and when it gets loose we reflex it, restoring Nature.

The operations for the removal of uterine tumours, whether benign or malignant, have received constant attention, and have been greatly improved in immediate safety and in technique, but much still remains to be done to make abdominal hysterectomy a surgically perfect operation. The American surgeons have done more than either the Continental surgeons or ourselves in working out improved methods in this branch of surgery. I would single out the method of Baer as the most surgical, and in his own hands it appears to have been very successful; but other surgeons do not seem to have succeeded so well with it, and it does not seem quite to have "caught on" or to be yet so perfect as to be the method.

The difficulties in these operations are the avoidance of immediate septic infection from the uterine cavity during the operation, the still greater danger of septic poisoning later from infection of portions of tissue whose vitality is undermined or destroyed in the course of the operation, and so to deal with the dense and highly-vascular tissues as to avoid hæmorrhage, and equally to avoid strangulation and probable after-death of large portions of tissue. Whoever can overcome each and all of these difficulties will have found the method, and Baer certainly seems to be very near success. Operations for malignant disease are now rarely abdominal, and my field is wide enough, without including rectal or vaginal surgery. I may say, however, in passing that I am not one of those who think there is a great future for the surgical treatment of malignant disease of the uterus.

I shall not dwell upon the vast strides made in the last twenty years in the surgical treatment of ovarian tumours. Early operation, intraperitoneal ligature of the pedicle and of all bleeding points, and a sepsis, whether arrived at by mere sterilisation of the materials and instruments used, or by the safer and more thorough use of antiseptics, have brought ovariectomy in competent hands to perfection, or very near it. I am afraid, from all I hear, that there is much still to be desired, both in its performance and in its results, when we take the country generally. There is always danger of unlimited and unskilled imitation, when a surgical procedure has been brought to something so near perfection, that its safety seems assured, and apparent to all.

Operation for the removal of the ovaries and tubes are, I hope, not quite so common as they were. We are beginning to learn that serious after-troubles may result from an immediately successful operation, and that a great many cases of inflammatory trouble about the ovaries and tubes will subside with time, rest, and improvement of general health, and in most cases more quickly without local treatment than with it; also that pelvic pains and lesions may and do arise from the vermiform appendix, and even from such distant organs as the kidneys, and that to whip out the ovaries and tubes, often in a conspicuously healthy condition, will not aid us in the cure of these distant lesions. A considerable number of cases in which adhesions after inflammation are so extensive and dense as to be a source of constant suffering, of tubes distended with pus or blood, or with an ectopic pregnancy, and of rarer pelvic lesions, will always remain a legitimate field for the relief of suffering and danger, and for the practice of pelvic surgery.

ORGANS BEHIND THE PERITONEUM.

We now pass to the consideration of certain organs which lie behind the peritoneum but which are, nevertheless, sometimes of necessity and sometimes by choice on the part of the surgeon, approached through the peritoneum. I am strongly of opinion that a more general use of the peritoneal road to them would also lead to an improvement in the diagnosis of the lesions affecting them, and to a corresponding improvement in their surgical treatment.

THE KIDNEYS.

The kidneys first claim our attention, and the one operation upon them which may, I think, nearly always be done alto-

gether outside the peritoneum is that for fixing them when they have become loose. It is scarcely to be believed that only a few years ago the possibility of such a condition as floating kidney was stoutly denied, and that by men of considerable experience in abdominal work. To-day a large number of people are relieved from much suffering, and many are returned from complete invalidism to useful and comfortable life by successful nephrorrhaphy.

I have so recently fully reported my own work in renal surgery by abdominal incision, that I prefer to leave it to the judgment of the profession, and shall not, therefore, dwell upon what I believe to be the improved future, both of renal diagnosis and surgery, by the more common use of this method. I must, however, refer to one other extraperitoneal procedure which I think has been curiously neglected in the past, and which I believe will have a most useful future. I refer to Abernethy's operation for reaching the iliac vessels. I found it in a recent case, simple, free from risk in performance, and most satisfactory in the complete control it gave of the whole course of the ureter, from the kidney to the bladder, and I should not hesitate to employ it in any case of impacted calculus, or other lesion of this important tube. I think it might also be employed with advantage in place of abdominal section for the removal of some retro-peritoneal tumours.

THE ILIAC VESSELS.

Lesions of the iliac vessels may be dealt with through the peritoneum, as well as by Abernethy's operation. Such a case of my own, which has never been fully published, I may briefly refer to as an illustration of what can be done under very unfavourable conditions. I was consulted in January, 1891, by a Norwegian, suffering from a pulsating tumour, which filled the left iliac fossa and stretched across the lower abdomen. He had some time before met with an accident, the exact nature of which I cannot recall, but I know that at the time I considered that it was the cause of his tumour, which I diagnosed as an aneurysm of the external iliac artery. It was a large pulsating swelling, was increasing, and was causing him a good deal of pain. I decided to tie the left common iliac, but could not at first make up my mind whether to do it by Abernethy's operation or through the peritoneum. He was a very short stout man, with a very fat abdomen, and not at all a nice subject for either operation, and I finally determined to employ the method with which I was most familiar, and reach the vessel through the peritoneum. The abdominal wall was enormously thickened with fat, the omentum equally so, and there was fat everywhere, and I found, when the abdomen was opened, that it was quite impossible to get any view of the seat of operation, and determined to proceed by touch alone. I first verified the diagnosis, then found that there was a short but sufficient portion of the common iliac artery uncovered between the aneurysm and the bifurcation. With a little careful manipulation I raised the peritoneum covering the sheath and divided it, introduced my finger through the opening, and noted the relations of parts, pinched up a portion of the sheath of the vessels and rolled it between my finger and thumb till I felt quite certain that I was clear of the ureter, nicked the portion held between my finger and thumb with probe-pointed scissors, isolated the artery without difficulty, and tied it firmly by gentle steady pressure, but not too tightly, with a single No. 3 Chinese twist silk ligature, cut the ends short and closed the abdomen. There was never any pulsation in the aneurysm afterwards, and it rapidly diminished in size. There was no trouble with the leg, which was carefully supported and wrapped in a large quantity of cotton wool; and he was up and well, with but little trace of the aneurysm, in about six weeks; and when last heard of was in excellent health.

Gentlemen, with the record of this somewhat unusual but, fortunately, successful bit of abdominal surgery, my too lengthy address draws to a close. When thinking over possible subjects, it occurred to me that a glance over the whole field of abdominal surgery, with some few illustrative cases, and some indication of the directions in which farther advance still seemed likely and possible, written by one who has been among the most active and enthusiastic workers in this fascinating branch of surgery for twenty-five years; who found it, though of some age, still in its very infancy; who has

helped in some measure to guide its tottering footsteps, and plant them firmly in a strong maturity, might be of interest alike to those who are my contemporaries, but whose life work has brought them only occasionally into touch with abdominal surgery, and to those who come as a younger generation to inherit a fine and improved estate, but one that I have endeavoured to show will well repay them for future labour. If I have not wearied too many of you, have interested some, and, above all, have suggested useful thoughts to those who hope to do useful work, I have attained my end.

THE MILROY LECTURES

ON

THE VALUE OF ISOLATION AND ITS DIFFICULTIES.

Delivered before the Royal College of Physicians of London.

By EDWARD SEATON, M.D., F.R.C.P.,

Medical Officer of Health to the Administrative County of Surrey;
Lecturer on Public Health, St. Thomas's Hospital.

LECTURE I.

AFTER some introductory remarks the lecturer said he had chosen as his subject a department of the health officer's work in which some progress had been made since 1872, and in which far more would have been accomplished if only medical knowledge in matters relating to the public health had been duly appreciated and acted upon.

After referring to Sir John Simon's account of "isolation" and quarantine as carried out in former days in the case of such diseases as leprosy, the Black Death and the plague, Dr. Seaton proceeded:

THE CRUELTY OF QUARANTINE.

The spirit which prompted and still prompts these quasi-military precautions, which have lasted through so many centuries even to the present day, was and is in reality, though not intentionally, exceedingly cruel. We need not search the pages of history to demonstrate this. The story of the cholera in Spain only a few years ago shows plainly enough how, under the influence of panic, the old spirit may at any time be revived, and be as cruel in its manifestations as it ever was in the Middle Ages. Nothing but the steady education of public authorities by responsible advisers or officers in medical as well as in other matters will ever dispel it. It prevailed in England even in the time of the famous Dr. Richard Mead, physician to St. Thomas's Hospital. Indeed, in his celebrated Discourse concerning Pestilential Contagion and the Methods used to Prevent it, Mead starts with the assumption that "quarantine" as carried on then and even now in parts of Europe was essential. How different a spirit is now in the ascendant is evidenced in a number of ways. Here let me distinctly say that by "quarantine" is meant the unscientific and consequently useless restrictions generally denoted by that name—restrictions which are even to the present day insisted on by the otherwise enlightened Governments of some European countries.

COAST ISOLATION.

I would emphasise and dwell upon this point because our system of medical inspection combined with "coast isolation," if I may so term it, in distinction to "quarantine," is at the present day insisted upon as a very essential part of our defences against invasion by certain epidemic diseases. Within the last few weeks the Local Government Board has issued a volume full of interesting details and important information on the subject of our defences against cholera. The necessity for isolation hospitals along our coast line at the port sanitary districts in communication with foreign countries for the reception of persons actually suffering from cholera and other infectious diseases brought to these shores is not only admitted but insisted upon.

[The lecturer here quoted passages from the Port and Riparian Sanitary Survey of England and Wales, 1893-4, in