RECENT ADVANCES IN THE SURGICAL TREATMENT OF INTRAPERITONEAL TUMOURS.*

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I CANNOT thank you for the extremely kind manner in which you have greeted me better than by promising, and by keeping my promise, not to detain you one minute longer than the fifteen allotted to me by the rules of the Congress; and I will at once proceed to remind you that the discussion, in which many of the distinguished surgeons now present will, I trust, take part, is on recent advances in the surgical treatment of intraperitoneal tumours.

The term recent advances, I think, may be considered as including the advances which have been made within the recollection of most of us—the improvements that have been made, the progress that has been secured during our own professional career, during the last twenty to thirty years. And I suppose almost everyone present—certainly everyone who has reached the age of fifty years—can remember a time when the removal of a tumour of any kind from the abdominal cavity was a surgical curiosity, exciting wonder, calling forth serious condemnation, and only encouraged by a very few of the most hopeful of our body.

Long after ovariectomy had risen from the period of distrust, and its mortality had been reduced below that of other operations of less magnitude—long after ovariectomy had secured the sanction of our profession and the confidence of the public—other abdominal tumours were left to run their course. Occasionally, perhaps after a mistake in diagnosis, a uterine tumour was removed; sometimes designedly, but at first almost as a forlorn hope; then, after a time, with an amount of increasing success which has led to the admission of the amputation of uterine tumours, or of enlarged portions of the uterus, among those surgical operations which, if not yet thoroughly accepted, are still recognised as worthy of serious consultation.

Still more recently, excision of the whole uterus affected with cancer has been repeatedly accomplished, and Porro's operation is taking the place of the Cesarean section. The removal of an enlarged spleen has now been effected in a sufficient number of cases to prove that it is more than a surgical possibility. Not only have cysts of the kidney been cured by drainage, and renal calculi removed, but the displaced, enlarged, or diseased kidney has been extirpated; gall-stones have been removed from the gall-bladder; suppurating hydatid cysts of the liver have been drained; peritoneal hydatid tumours have been excised; and, within the last few weeks, authentic reports have reached us of excisions of portions of the stomach, and of recovery after the removal of more than six feet of the small intestine. This has followed excision of smaller portions of intestine during ovariectomy; and a bolder course has been taken of late years in cases of obstructed intestine, of wounds or rupture of the bladder, and of extra-uterine foetation. Many of these cases will be brought before you almost immediately by Mr. Lawson Tait, whose table of a very remarkable series of cases I have only received this morning, and have not yet had time to examine.

As some of these subjects have been reserved for discussion in this Section, and others in the Section of Obstetric Medicine and Surgery, I make no further allusion to them now, and pass on to refer to three points on which I trust information will be gained in the discussion which will presently take place. They all appear to me to be intimately associated with recent advances in the surgical treatment of intraperitoneal tumours, and in abdominal surgery generally. These three points are: 1. The union of divided edges, or separated surfaces, of peritoneum; 2. The use of pressure-forceps in preventing, or stopping, or diminishing the loss of blood during and after operations; 3. The practice of drainage in relation to antiseptics.

1. I should not have thought it necessary, after the progress which has already been made in abdominal surgery, to insist at any length upon what I believe now to be a fundamental principle or rule of practice accepted and adopted by all the most experienced and successful operators at home and abroad, if I had not been fiercely attacked by that singular society, which, admitting the right of man to kill all the lower animals, to use them for food, their skins for clothing, their feathers

for ornament, to make them labour for our convenience, denies our right to use them for any scientific purpose, or in the hope of benefiting the human race. These curious philanthropists persistently attack me because I sacrificed a few rabbits, dogs, and guinea-pigs, in the year 1859, in order to demonstrate, beyond all doubt, for all time to come, the fact that human life may be saved, and lifelong suffering prevented, by an improved mode of uniting penetrating wounds of the abdominal cavity. They argue that results observed in animals are no guide to what may happen in man; that my observations were not new, and that some believe they are not true; that some think ovariectomy has, on the whole, rather shortened than lengthened the life of woman; and that its mortality has not been lessened by the knowledge gained by my experiments on animals. Of course, I have not taken any notice of these attacks; but I wish to show you exactly what I did, and leave you to judge whether or not the human race has been served by the death of about a dozen animals twenty years ago. Here are the specimens which I have been permitted to bring hither from the Museum of the College of Surgeons. Before I hand them round, let me tell you exactly what led me to make the experiments. The first three women upon whom I performed ovariectomy all recovered. The fourth died without, as I thought, any good reason why she should have died. I was naturally much interested in the *post mortem* examination, and I obtained the invaluable service of my friend Dr. Aitken to make it. We found that the state of the inner surface of the wound was far from satisfactory. At that time, instead of the sutures I have used of late years, I used harelip-pins and twisted sutures to unite the wound; and we saw at once that some of the pins on the inner aspect of the abdominal wall were bare; the cut edges of the peritoneum were retracted; a portion of intestine was in contact with the wound, the impress of which was obvious on the surface of the gut. Some coagula of blood, and an abundant, consistent, lymph exudation upon the peritoneal surface of the intestine, corresponded to the edges of the incision and the surface of the wound. Recent lymph glued the opposing surfaces of the intestines to each other. I saw at once how much better it might have been if the peritoneal edges had been accurately brought together, and had united; and thought of doing this in my next case. But I found careful instructions in text-books and treatises to avoid the peritoneum, just as some few surgeons even now fear that they may set up peritonitis, or that pus from the tracks of the sutures may get into the peritoneal cavity. So I determined rather to make the experiment *in corpore vili* than on women. Dr. Richardson kindly helped, by narcotising the animals, some with puff-ball and some with chloroform. In these specimens, where the divided edges, or rather surfaces, of peritoneum have been pressed together, you see that the smooth serous inner coat of the abdominal wall is perfectly restored. You cannot see the stitches on the inside, though plainly visible on the skin; and there is no adhesion of intestine or omentum. When skin or mucous membrane are divided, their edges must be brought together to secure direct union. If they be inverted, union is prevented. The exact opposite holds good with serous membrane. The edges should be inverted, and two surfaces of membrane pressed together, so that the sutures are not seen; and the effused lymph makes so smooth a surface that even the line of union cannot be seen. In these specimens, you can only discover it by the line of sutures in the skin. But mark the contrast in these other specimens, where the peritoneal edges were purposely excluded from the sutures. In every case where the animal was not killed within a day or two, intestine or omentum adheres to the inner surface of the abdominal wall, thus completing the peritoneal sac, at the great risk of intestinal obstruction, or of permanent discomfort to the survivor, to say nothing of a want of firm union and subsequent ventral hernia. One can hardly understand the so-called reasoning which insists that this should not be demonstrated once for all in a few narcotised animals, but that we should grope our way to the realisation of the truth through the sufferings and by the dissection of a series of women. You can examine the specimens now, and they will remain in our College Museum, and will serve, I trust, to dispel any doubt which may still be felt as to the best mode of uniting penetrating wounds of the abdominal wall. And I will go still further, and say that, whenever edges or surfaces of peritoneum are divided or separated, they should, if possible, be reunited. Peritoneum must be opposed to peritoneum; and this can only be done by drawing it over the pedicle, or stump, or divided parts, and fixing or uniting it as an envelope by a line of sutures, or by the uninterrupted suture. I have already urged this so persistently in my works on diseases of the ovaries—in the Hunterian Lectures at the College of Surgeons in 1878—in a paper on the removal of uterine tumours, brought before the British Medical Association at Cambridge last year—and in some recent papers, that I will at once pass to another improvement which has added to the success of abdominal surgery, namely:

* Speech delivered at the opening of a discussion in the Surgical Section of the International Medical Congress.

2. The use of pressure forceps—forcipressure, as it has been termed. I believe I was the first to replace the old “snip”, or “clip”, or “bull-dog”, so easily lost in the abdomen, by larger instruments. Mr. Nunneley arranged for a more permanent occlusion of bleeding vessels by tubular forceps; Kœberlé and Péan contrived the “pincés hémostatiques”, which I now show in different shapes and sizes, as well as the smooth powerful nickelled instruments, which I prefer. They are here of various sizes, straight and bent at different angles. The smaller are useful in almost any surgical operation, for the temporary stopping of bleeding before ligature, for torsion, or for the suppression of bleeding permanently by crushing together the coats of the bleeding vessels. The larger ones are very useful as means of making an operation almost bloodless—a sort of substitute for Esmarch’s bandage, or the elastic ligature, where these cannot be applied. I have found them especially useful when removing uterine tumours. They may be applied as temporary clamps before amputating the growth; and, after this has been cut away, they may be removed one after the other, and all bleeding vessels at once secured by ligature. This may appear to be a little thing, but it stands for much in the sum of daily surgery; it comes in to aid at every moment, and is of almost universal application.

3. The question of antiseptics and drainage is one of far greater difficulty. On the general question of antiseptic surgery I must not enter. Another day, in this section, is specially devoted to this great subject. But the question of drainage, in relation to antiseptics in abdominal surgery, is so curious that I must devote a few minutes to it before concluding. What appears to me so remarkable is, that, while in general antiseptic surgery drainage is so very essential—is, indeed, a fundamental part of the system—in my own experience of ovariectomy, and of the removal of uterine tumours, antiseptics have abolished drainage. I have not even used a drainage-tube for more than three years. Formerly, in cases where much fluid was likely to collect in the abdominal cavity after operation, drainage was necessary. If the fluid did not escape, it putrefied, and poisoned the patient: or had to be removed by puncture, or by reopening part of the wound. Since adopting antiseptic precautions, either fluids do not form—or, if they do, they do not putrefy—and they are absorbed without doing any harm, without leading even to any febrile rise of temperature. I do not say that I have not seen one or two fatal cases, where it might have been better if I had drained—or that, in one or two, part of the wound has not reopened, and permitted the escape of some fluid—but, I do repeat, I have not used a drainage-tube for more than three years; and my present feeling is that the case must be very exceptional indeed in which I shall venture to use one. I trust we shall hear from Mr. Thornton and others who have more experience of drainage than I have, what they have learned from this practice. Professional opinion on this point has still to be settled; but I think forcipressure may be accepted as unreservedly as union of peritoneal surfaces in all cases of removal of abdominal tumours; and I feel sure that, by careful attention to all needful antiseptic precautions, these operations may now be undertaken with a far more confident expectation of a successful result, than could have been reasonably entertained a very few years ago.

HEALTH OF COLONIAL AND FOREIGN CITIES.—A summary of the weekly returns, with which the Registrar-General is favoured by various local authorities abroad, shows that the average annual death-rate during the second or spring quarter of 1881, in thirty-two colonial and foreign cities, having an aggregate population of nearly fourteen millions of persons, was equal to 30.3 per 1,000. In the twenty-two European cities, the average rate was 31.1 per 1,000, against 20.5 in twenty of the largest English towns. Among the thirty-two colonial and foreign cities, the lowest death-rates were 19.7 in Geneva, 20.4 in Christiania, 21.1 in Rotterdam, and 21.4 in Philadelphia; the rate was, however, equal to 36.1 in New Orleans, 37.1 in Buda-Pesth, 39.6 in Prague, 40.9 in Madras, and 61.8 in St. Petersburg. In Paris, 316 deaths were referred to small-pox, 264 to measles, 592 to diphtheria and croup, and 416 to typhoid fever. Small-pox was also fatally prevalent in Vienna, Buda-Pesth, New York, and Philadelphia. Diphtheria caused 337 deaths in Berlin, 566 in New York, and 274 in Brooklyn. Scarlet fever showed increased prevalence in Paris, Berlin, Breslau, Brooklyn, and New Orleans. The deaths referred to typhoid fever in Paris, which had been 804 in the first quarter of the year, declined last quarter to 416, and were equal to an annual rate of 0.84 per 1,000; whereas the death-rate from the same disease in London did not exceed 0.12 per 1,000. In St. Petersburg, no fewer than 1,637 deaths resulted from typhus and typhoid fevers, showing a considerable increase upon the numbers returned in the two preceding quarters, when they were 411 and 1,018 respectively. These 1,637 deaths in St. Petersburg last quarter were equal to a rate of 9.81 per 1,000, against 0.14 from the same causes in London.

THE INTERNATIONAL MEDICAL CONGRESS.

PROCEEDINGS OF SECTIONS.

SECTION OF MEDICINE.*

On Bacteruria. By WM. ROBERTS, M.D., F.R.S. (Manchester).—For some years, Dr. Roberts had occasionally come across cases in which the urine, at the moment of emission, was loaded with bacteria. The urine had the peculiar grey opalescence indicative of commencing decomposition, and a heavy disagreeable odour, like that of stale fish. The reaction was acid, and the urine showed no tendency to pass into the ammoniacal fermentation. There was, in males, some vesical irritation, marked by more or less frequent and painful micturition. In females, symptoms of vesical irritation were sometimes, at least, absent. Pus-corpuscles were always present in insignificant numbers. The general health did not materially suffer. Some of the cases appeared for many years—the vesical symptoms rising and falling in intervals. The organism appeared as micrococci, and actively moving short rods composed of molecules, often joined together in zigzags. Dr. Roberts concluded that the cases in question depended on the establishment of a colony of bacteria (*Bacterium termo*) in the urinary bladder, and that the proliferation of the organisms, and perhaps certain products of its action as a ferment, gave rise to irritation in the bladder. The condition was not identical, but opposed rather, to that in which the urine (presumably under the action of the micrococcus ureæ) became ammoniacal in the bladder. It was analogous to those cases in which a colony of sarcina established itself in the bladder. The urine after removal showed little tendency to ordinary putrefaction, and the growth of the organism appeared not to go on in the cold. The condition described was removable in a few days, even after lasting several years, by thirty-grain doses of salicylate of soda twice a day. Cases were given.

On the Origin and Cure of Scrofulous Neck. By T. CLIFFORD ALLBUTT, M.A., M.D., F.R.S. (Leeds).—The purpose of the paper was to insist on the local causation and the local development of many cases of scrofulous neck. While giving due weight to the undoubted influence of heredity in favouring this malady, yet such states might be, and often were, set up in young persons by local causes alone was equally indubitable. Moreover, local causes played a large—perhaps the chief—part in producing the malady in those originally strumous. Artificial scrofula was at least as common as the natural. Of local causes, irritation of neighbouring mucous membranes was the most common; pharyngeal and aural-pharyngeal irritations being far the commonest antecedents, and the septic kind of these the most effective. The glandular enlargements were thus bubonic, and by caseous degeneration became themselves the foci of further like mischief. After minute inquiry into possible morbid influences acting through the mucous membranes, a rapid and complete cure without disfigurement must generally be sought by surgical means. Free incision and enucleation of caseous deposits were essential. The softening mass under the jaw was usually a subcutaneous abscess with more or less thickened walls, which depended upon infection from the deeper lying caseous glands. With these it communicated by sinuous channels, often very obscure. Upon the laying open of these, and the clearing out of the inner foci, care and future safety depended. Many cases were given, in which Mr. Teale had co-operated with the author in carrying out these principles.—Mr. F. TREVES (London) agreed with Dr. Allbutt that a spontaneous origin for scrofulous glands was extremely rare, if not doubtful. In nearly every instance, it was possible to make out some lesion at the periphery. Such lesion acted as the exciting cause only; and he must strongly oppose Dr. Allbutt’s view, that scrofula might be due to local causes only. In every case, there was, he believed, a tendency for the gland-apparatus, as well as the other structures, to react upon the most trifling irritation. This might be either hereditary or acquired. In no perfectly healthy person could the gland-affections of scrofula be artificially produced. The most effective exciting causes of these tumours of the cervical glands were those that involved the adenoid tissue of a mucous membrane. Inflammation of the adenoid tissue of the pharynx caused almost immediate enlargement of glands, but an eczema of the face might exist for a long time before it produced such a result. The commonest seats for scrofulous tumours of glands were the neck, the bronchial region, and the mesentery; and it was significant that the glands in these regions received lymph from the largest districts of adenoid tissue in the body, viz., the

* Concluded from page 324 of last number.