years. Yet it is curious that it was originally proposed by Littre in the last century in cases of atresia ani. He proposed in such cases to open the abdomen of the child in the left groin, and there to make an artificial anus; but he does not seem ever to have done it, and I am not aware who really did do it first. It was thought by Callisen, a Danish surgeon at the end of the last century, that it would be better to go into the loin and get further away from the disease, and to do lumbar colotomy, as we now call it. But he never did the operation; and it was not until the year 1839 that Amussat performed the first operation, as far as is known, of lumbar colotomy. We have very good authority for that, because Mr. Erichsen was a student at the time in Paris, and Amussat asked him to be present, as he mentions in his book, and he accordingly witnessed that first historical colotomy. Since that date surgeons have done lumbar colotomy in adults as a rule, and some have done (though others have not approved of it) Littre's operation in children. The late Mr. Curling, surgeon to the London Hospital, who had a large experience in diseases of the rectum, read a valuable paper before the Royal Medical and Chirurgical Society in 1860, giving a large number of cases of colotomy in infants for atresia ani, and he also gave the results of some twenty dissections and experiments on stillborn children, with a view of determining if possible which was the best operation to perform on a child. He came to the conclusion, and I quite agree with him, that Littre's operation—that is, the inguinal colotomy of the present day—was by far the best operation in a child, and for this reason: that you can never tell exactly where the colon will be. You have perhaps dissected into the perineum some distance to find the rectum and have failed. If you operate in the left loin you have no certainty whatever of finding the bowel; it may be abnormal altogether, and may not be in the loin at all; but if you go into the left groin, and open the peritoneal cavity, there is no doubt that you will manage somehow to find the sigmoid flexure, though it may even be on the opposite side. Therefore I think the majority of surgeons (there are one or two exceptions) in the case of newborn children with atresia would recommend inguinal in preference to lumbar colotomy.

[To be continued.]

PERSONAL EXPERIENCE OF ASEPTIC AND ANTISEPTIC SURGERY.

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ANYONE who has seen much surgical work in London in hospital or private practice, or in both, during the last thirty or forty years, who can remember the past and will compare it with the present, must be impressed by some remarkable changes—by the former prevalence and the present absence of suppuration, hospital diseases and surgical fever, by the rapid healing of wounds, and by the steadily diminishing mortality after all surgical operations.

In 1858 or 1859 I was invited by an old friend (since dead) to see him perform his first ovariectomy in a large London hospital. He did the operation as well as it could have been done then, but I asked him how long he thought the woman would live. He said, "What do you think?" I replied, "Not three days." "Why?" he asked. "Because," said I, "you came straight from the anatomical theatre where you had been demonstrating for an hour, and were followed by a crowd of dissecting students. You did the operation as well as anybody could do it, but you cannot reasonably expect the woman to recover." She did not live forty-eight hours. She died of acute septicæmia, then called peritonitis. Several years afterwards he told me this case was a revelation to him; that neither he nor his colleagues nor his teachers had given a thought to such causes of excessive mortality after surgical operations. I could easily add many equally noteworthy illustrations of the wide difference in professional thought and work between 1858 and 1892, not only in London, but where-

ever the English language carries the influence of our example. For the present, however, I must be content with the barest sketch of what my own work has taught and is teaching me in regard to aseptic and antiseptic surgery.

Any student of the history of surgery who wishes to ascertain how my own practice has been modified since 1857, how asepsis gradually became more perfect, when and how antiseptics were introduced and modified, the spray tried and abandoned, may be interested by reading some ten or twelve pages of my book published in 1885 (now, I regret to write, out of print), entitled *Diagnosis and Surgical Treatment of Abdominal Tumours*. Lecturing at the College of Surgeons in December, 1890, I summed up the additional lessons learned in the preceding five years. After referring to Mr. Hankin's work on defensive proteids, and the power of killing bacteria which the serum of healthy blood possesses—a power connected probably with the presence of a globulin which is only soluble in dilute solutions of common salt—I suggested that these investigations may "explain the antiseptic action of common salt and strengthen the belief that we have in dilute saline solutions a safe and useful fluid for surgical irrigation, preferable to water which has been sterilised by boiling, and possibly to solutions of phenol or perchloride of mercury, either of which may irritate the tissues of the patient or injure the instruments of the surgeon." I added, "Some such reflections as these have been leading me to the conclusion that the use of antiseptics in modern abdominal surgery may be summed up as combining the utmost possible cleanliness of the body, the clothing and surroundings of the patient, the surgeons, assistants, and nurses; the perfect sterilisation of all instruments by boiling water, as well as of the silk or any material used for ligatures or sutures, and the absolute purity of the sponges or any substitute for them. I long ago asserted that in our daily work we had much grosser causes of danger to guard against than enemies which are invisible without a microscope—that dried clots of blood, or fragments of diseased tissue, imperfectly cleansed from our knives, scissors, forceps, or needles, may act as directly as vaccine matter. Careful assistants or nurses may not perform this duty of cleansing perfectly, and I think what we are learning from the bacteriologists leads to the conclusion that it will be well after all operations, and probably before them also, to boil all our metallic instruments for a few minutes."

A careful observer in the operation theatre or room of any hospital, or in the private practice of the most scrupulous surgeon, may very often detect imperfections in the way the most perfect arrangements are carried out, or sometimes altogether neglected. Some of the best of trained nurses are far from attentive in details, and very few patients can be made to understand the importance of much which they consider frivolous. To avoid or prevent mischief from any such ignorance or carelessness, I have prepared a code of instructions which, if studied and acted upon by assistants and nurses, with such modifications or additions as the experience or reflection of any surgeon may lead him to adopt, will spare him much troublesome explanation, and secure the observance before, during, and after operations of many precautions too often neglected, but which may seriously affect the result. I hope to offer this code to the profession through the *BRITISH MEDICAL JOURNAL* in a form which, if printed or copied legibly, might be given to relatives and nurses for their guidance. In the meantime I may refer to an admirable paper in the *Liverpool Medico-Chirurgical Journal* of last January by Mr. Alexander on Twenty Years of Operative Work, which no operator can read without interest; to the valuable reports of Mr. Lockwood on Septic and Aseptic Wounds and Surgical Cases,¹ and to the ninth volume of the *Transactions of the American Surgical Association*, 1891, which contains a paper by Dr. Gerster, Aseptic and Antiseptic Details in Operative Surgery, with the discussion which followed, and another article by Dr. Fowler, Aseptic Operative Technique, all these are extremely interesting as proofs of the tendency of thoughtful surgeons to "hold fast that which is good," to reject that which is of doubtful utility, and, above all, to observe the utmost simplicity consistent with safety.

(To be continued.)

¹ BRITISH MEDICAL JOURNAL, October, 1890, and May, 1892.