

spent to overcome this than any other difficulty, and I look with confidence to that combination of qualities possessed by the Canadian surgeon to evolve a simple method, which will secure the long looked-for prize, viz., an effectual radical cure. Not long after I began practice, invagination was in vogue; Gerdy, Wutzer, Rothmund and Wood, of London, I recollect as operators, and were sanguine enough to believe they succeeded. My experience of invagination is confined to one case. The late Dr. Dickson had another previously. We failed, and thus ended my experience of radical cure. Many tried it, and, as now with the open method, asserted their success; but Mr. Kingdon, of the London Truss Society, demolished their pretensions one after another by the stern logic of facts, and men who were reported as successful examples of the radical cure were fitted by him with trusses. Time has proved the truth of its failure, and I fear invagination is soon to be relegated to the capacious storehouse of obsolete operations.

Antiseptics came; it stimulated to an unparalleled degree all surgery, operative and otherwise, chiefly abdominal; the sanctity of the peritoneum was invaded, and became obedient to the general law. It need not be wondered that radical cure again revived.

Mr. Birkett says that the objects to be effected are, closure of the abdominal opening; obliteration of the sac; strengthening the abdominal wall on the track through which it passes; improved tone of the peritoneal ligaments of the viscera; and unless "it completely and perfectly effects these ends, it must certainly fail sooner or later." Hence, one after another, operations have failed, and now all closed methods, as I said, are condemned. But this in no wise dampened the ardor of the progressive surgeon, and at no time has there been so many workers, with clearer notions, strong in their determination to secure success.

Before noting the operations in detail, and reviewing the position and prospects of the operation down to date, I should mention the injection plan attributed to a Mr. Heaton, of Boston. It consists in causing union and solidification by injecting subcutaneously into and around the whole length of the sac a solution, of which oak bark decoction is the main ingredient. Those

who have seen the effects of hypodermic injections of morphia can readily understand it; how it hardens, condenses and unites the tissues. It promised well for a time, having been kept secret for some years. It has the merit of easy performance, and, it appears to me, ought to act well in children; but it is invisible, has not found favor with surgeons of repute, and is not likely to grow in favor and become a standard operation.

All recognised modes of operation now in vogue, and worthy of notice, have many points in common; the essential feature of all is the ligation and obliteration of the sac, and it is worthy of remark, they have been more successful in the practice of the designers of the operation than in that of those who repeated them.

The principal operations in Great Britain and Ireland are those of Banks, Ball, and McEwen; for details of these and many others, you can consult a very valuable retrospect of surgery, published by a leading surgeon of Montreal, Dr. Shepherd. I will only take a very rapid review of them. Banks ligates the sac as high up as possible after cleanly dissecting it out, ties and cuts off omentum, sutures the pillars with silver wire, and caves them in. He recommends a light truss. He followed 66 cases, 44 were successful, 7 only partially so. McEwen, who obtains the remarkable score of one failure, and not one death in 65 cases, dissects off the sac, sometimes cuts it off, and sometimes leaves it; when left, puckers it up to form a boss or bulwark to support the opening; frees the opening around the margin of the inner ring with the finger, then close the canal by stitching conj. tendon and Poupart's ligament; drains the wound; keeps patient in bed six weeks. The first dressing is done at the end of the second week. It would undoubtedly require an experienced surgeon with every appliance at his command. His American imitators assert that nothing like his success can be obtained by them.

Ball, of Dublin, isolates the sac, empties it, carefully applies torsion four or five times; ligates high up, then sutures skin twisted part and pillars. Torsion is the great feature he relies on.

As might be expected, American surgeons have exercised their extraordinary skill, fertility of resources, and inventive genius, on many occasions to achieve success in this operation.