

looked for. The practical bearing of these observations will be apparent shortly. Now, let me very briefly review the different surgical operations which have been, and still to some extent are, practised for the relief of obstruction, and then we will be the better able to understand which of these procedures is best fitted to meet the different kinds of obstruction we have to deal with.

First, the abdomen may be opened in the middle line, or outside of the recti on either side, or a descending coil of bowel may be cut down on wherever it shows itself. The first is, on the whole, the operation which fulfils the indications in many circumstances, as it gives freest access to the whole cavity, and there is less risk of effusion between the muscular walls of the belly, and perhaps affords the best hopes of a rapid recovery. "Laparotomy," as it is now termed, is, however, a very serious and difficult operation in cases of intestinal obstruction. As is well known, it is in no way comparable to opening the belly to remove an ovarian or other growth, as not only are the patients on whom it falls to be performed usually much exhausted by the nature and continuance of their complaint, but the bowel is so much distended that its return within the cavity of the abdomen after the parts have been examined is always most difficult (in truth sometimes almost impossible), while the manipulation which is required to attain this end immensely increases the risks of the operation. The tension, too, which exists after the belly has been closed is so great that all hope of that rest and freedom from irritation, which is essential to the successful treating of such wounds is often destroyed. It is not a little remarkable how, before the belly is opened, in many cases the distension of the bowel may not appear great, and there may be no great prominence of the abdomen; but, so soon as the wall is divided, coil after coil of greatly enlarged and gas-distended gut come out, defying all means of repression or even protection, and causing the utmost dismay as to how best to deal with them. It is always most desirable not to puncture the distended bowel, as however small the instrument employed, there is always considerable fear of fæcal exudation, and ligatures often fail to bring the serous surfaces together so as to close the aperture. The walls of the bowel, too, are thin and weak from the distension to which they have been exposed, and so very serious damage may result. It not unfrequently happens that distinct rupture of the gut will take place where the puncture has been made. In replacing the extruded bowel, take what care we may, it is apt to be bruised and injured, and small extravasations of blood will now and again appear and escape into the cellular connection when pressure is withdrawn. The contact of the finger nail and tips must be carefully avoided, and sponges introduced between the hand and the bowel; but with all this and every care we

can use harm is too sure to follow. There can be little doubt but that it is the manipulation which does such serious harm in laparotomy, and it is probably this which renders the operation so disastrous. In ovariectomy and similar operations we do not, as a rule, require to touch the bowel, and occasionally it is never seen. Further, laparotomy is, in many cases, the only available operation in obstruction occurring in very young and weakly children, yet they are wholly unable to stand so terrible an ordeal.

The cases in which laparotomy is indicated are those in which we have to do with tumours which we desire to excise at the same time that we relieve the obstruction which they occasion; in cases of intussusception, if it is thought possible to disengage the invaginated bowel (that is—early in acute cases if it is to be done at all); in twists also, and in strangulation from internal hernia when we have to adjust the parts, and not merely to save life. It is probably the only operation by which a foreign body obstructing the bowel (not being fæces) can be extracted. In occasional instances in which the exact position of loops, bands, or adhesions can not be recognised, laparotomy may be our wisest proceeding, but of this more will be said. Cancerous tumours, if of small size, and situated in the small bowel, may thus be excised, and the bowel re-united, or a false anus established. If the tumour be in the large bowel, then after excision a false anus may be established in the loin or in the groin, as, it will be in the recollection of the president, I attempted in a patient I saw with him. This is better than attempting to unite that part of the bowel, but in the small gut suturing the divided bowel has most to be said in its favour. It is, of course, only in limited strictures that this operation (colectomy) can be attempted. By such an operation, we attempt not only to remove the obstruction but get quit of the disease. So laparotomy has this strong claim on our attention that it may enable us to carry out a curative, and not simply a palliative treatment.

When laparotomy has to be performed, it is best to make at first a small opening to enable us to search for the seat of obstruction without opening the whole cavity. This must be done with the greatest gentleness; afterwards, if it is found necessary, the orifice may be enlarged. It is the empty bowel which we seek for, and this lies in the pelvis. We trace it up to the place of obstruction. This plan is better and easier to accomplish than to pursue the opposite course, which is what is commonly done. As little bowel as possible should be exposed. A sponge wrung out of carbolic solution should be kept over the hand and wound. We should search first in the neighbourhood of the cæcum, and determine whether the mischief is in the greater or the lesser bowel. The cæcum is the best starting point in all these investigations, and