

Finally, let us consider the operative procedures which may be undertaken for the relief of intestinal obstruction. If rest in bed with abstinence from food, one or more full doses of morphine, a few large enemata through a long tube, and one or two washings out of the stomach do not succeed in bringing relief in a case of *acute* obstruction within two or three days, it is advisable to perform laparotomy without further delay. Heretofore the operation has been usually put off for a much longer period; but with our improved knowledge of these cases, and consequent more early and certain diagnosis, an earlier resort to opening the abdomen will without doubt lead to much better results. Besides, since it has been learned that the peritoneal cavity is not such a sacred or dangerous precinct to invade as was once thought, there need not now be such hesitation in undertaking the operation. It is pretty generally admitted that delay is more to be blamed for previous bad results than the operation itself. According to past statistics only about one recovering out of three have been reported, and it is more than probable that if all cases had been made public the proportion of unsuccessful ones would have been found to have been considerably in excess of that estimate.

The operation is generally performed in the median line below the umbilicus. When we have opened the abdominal cavity we proceed to search for the cause and position of the obstruction. When this does not immediately appear, we may generally find it most readily by feeling for the collapsed coils of intestine, which as a rule lie below the brim of the pelvis, and tracing them upwards to the point of disease. Having discovered this we will have to vary our course of action according to the cause of the obstruction and the condition in which we find the parts. If a band or cord be the source of trouble we must divide it, two ligatures having been applied, one on either side. In cases of strangulation through slits or apertures, it will be advisable after reduction, to close the opening by suture. It is well also in all these cases to examine the parts carefully in order to ascertain whether or not there may be more than one constricting band present, for in some instances such have been found at the autopsy.

Cases of volvulus are not well suited for relief

by laparotomy, as it is found difficult to deal with the enormous dilated coil of sigmoid flexure, which is generally the seat of the disease. Puncture of the gut may be employed to relieve the distention and thus enable us to reduce the part; but the volvulus is apt to reappear after a little time. A case of my own, which I think was one of this form of obstruction, finally recovered after a dozen or more punctures through the abdominal wall with a small hypodermic trocar. The punctures were made at different times during the several days that the excessive meteorism lasted, and seemed on each occasion to afford marked relief. I would advise caution however in puncturing the distended bowel in such cases, for there can be no doubt that unless the instrument used be very small there is danger of extravasation of the intestinal contents through the openings made in the gut. I know that such oozing from the punctures may, and does occur, for I have seen it in two instances in which, after laparotomy had been performed, I was obliged to let out the gas from the distended coils of intestine before I could return them into the abdominal cavity. After a few minutes, however, the openings seemed to close sufficiently to prevent any further exit of faecal matter. One of these cases recovered and the other lived till the 7th day after the operation, so that I think the punctures did not lead to any serious complication. And here, let me say that the great distention of the bowel met with in these cases gives rise to the chief difficulty in performing abdominal section for the relief of intestinal obstruction. It is almost if not quite impossible to prevent the distended bowel from escaping externally, and it is equally impossible to put it back in its place before its size is reduced by puncture. I would be inclined to try the insertion of a gum elastic tube into the colon in cases of volvulus, so as to permit of the escape of gas by that method. If all else fails, a faecal fistula can be established above the seat of obstruction.

When a portion of intestine is found to be gangrenous, whether in cases of intussusception or other form of obstruction, it must be excised. After doing this it is considered better in all cases (except those in which the upper part of the small intestine is involved), to secure the cut ends of the bowel by sutures to the abdominal wound, rather than to proceed at once to unite them to each