

brought into contact with and united to it by several Lembert sutures in such a way that there will be as little strain as possible on the usual permanent sutures after they are placed and tied. A longitudinal opening, an inch and a half long, is then made in the superior border of the gut. The corresponding opening in the stomach should be an inch above the greater curvature and parallel to it. The extreme ends of these wounds are now united by temporary sutures passed through all the coats of the stomach and intestine, and the sutures are tied, the ends being left long. An opening is now made near the centre of the stomach sufficiently long to allow of the invagination of the openings already made in both bowel and stomach. This having been accomplished, the openings are sutured in the manner already described, the needle passing through all the coats of the intestine and stomach. The invagination is reduced, and the slit in the centre of the stomach is closed by means of Lembert sutures.

When the disease is located in the cæcum or in the ileo-cæcal valve, ileo-colotomy may be performed as follows, instead of in the manner previously described :

The diseased cæcum having been completely excised, an opening is made in the side of the healthy colon two inches from its cut end ; into this opening the free end of the ileum is inserted. The temporary sutures are applied, tied, and brought out through the cut end of the colon, and, traction being made on them, the cut edge of colon and free end of the ileum are invaginated and drawn through the free end of the colon. The sutures being applied in the manner previously described, the invagination is reduced. The free end of the colon is turned in to the extent of an inch, and the opening is closed by a row of Lembert sutures, care being taken to pass the needle through a few shreds of the submucous, as well as the peritoneal and muscular coats, as advised by Halsted.

When the diseased cæcum can not be excised, owing to the existence of firm and long-standing adhesions formed between this portion of the bowel, the ureter, and the iliac vessels, ileo-colotomy should be substituted for ileo-cæcotomy. The diseased cæcum and the ileo-cæcal end of the ileum having been emptied of their contents, clamps are applied four inches on either side of the diseased structure. The ileum is divided. The end of the ileum which is attached to the cæcum is invaginated, and the opening closed by means of Lembert sutures. An incision is made in the convex surface of the colon large enough to receive the free end of the ileum, which is attached to the edges of the cut in the colon by the usual temporary sutures. An opening is now made in the colon two inches higher up, through which opening a forceps is passed and the ends of the temporary sutures are seized, and by their aid the

free end of the ileum and the edges of the opening in the colon to which it has been attached are invaginated and drawn out through the upper slit in the colon. The permanent sutures are passed as usual, tied, and cut off short. The invagination is reduced, and the longitudinal opening in the colon closed.

An irreducible intussusception is treated in this manner: A slit is made in the intussusciens and gentle traction made on the intussusceptum until its neck appears outside the opening in the intussusciens. The base is then transfixed with two fine straight needles armed with horsehair, and the intussusceptum is amputated a quarter of an inch above the needles, leaving a fair stump beyond them. The sutures are now passed through the invaginated bowel, caught up in the interior of the bowel, divided, and tied. The ends of these sutures are left long and used as retractors in place of the regular temporary sutures while the other sutures are being placed and tied. This having been done, they are cut off short, the invagination is reduced, and the longitudinal slit is closed. The object of transfixing the neck of the intussusceptum previous to its amputation is to prevent it from retracting, and it also insures the maintenance of the proper relative positions of the different layers.

The various experimental intestinal anastomoses, which in the past few years the writer has performed in accordance with this method on dogs, have proved the following points in the technics to be of consequence :

1. The longitudinal slit which is made in the segment of bowel having the greatest calibre (proximal or distal), and through which the invagination occurs, should be located at least two inches from the cut end of the bowel.
 2. The mesentery of both segments must be included in the first temporary suture which is passed at this intestinal border ; this prevents sloughing of the bowel at this point.
 3. The sutures should be placed at least a quarter of an inch from the cut intestinal edge ; they should be interrupted, about twenty in number, and should not be drawn too tightly when they are tied.
 4. The best suture material for this work is carefully tested and prepared horsehair.
 5. The needle best adapted to this work is a round, straight one (milliner's, Nos. 6 to 9).
 6. The invagination after the sutures have been placed must be carefully reduced, rather by manipulation than by traction, otherwise the sutures may cut out.
 7. In closing the longitudinal slit too much of the intestinal edges should not be turned in or a contraction may result at this point.
- The special claim of this method of intestinal suture to recognition and further practical trial