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PARTIAL GASTRECTOMY

PRELIMINARIES

MAKE SURE YOU HAVE THE GOLIGER SUSPENSION CLOSE TO THE PATIENTS CHIN.

MAKE SURE YOU CAN SEE THE PATIENTS NIPPLES.

MAKE SURE THERE IS A DIATHERMY PAD.

MAKE SURE YOU HAVE THE CORRECT PATIENT.

STAND ON THE RIGHT SIDE OF THE PATIENT WITH ONE ASSISTANT ON THE OTHER SIDE.

CLEAN UP FROM THE NIPPLES DOWN TO THE GROIN AND Laterally AS FAR AS THE ANTERIOR SUPERIOR ILIAC CREST WITH TWO APPLICATIONS OF 70% Proganol with Chlorhexidine 0.5% and then dry it off.

TOWEL UP from the pubis to 5 cms. from the lower end of the sternum. Make sure that you have access at the top of the incision and apply adhesive drapes, 60 x 23.5 cms.

CHECK THE DIATHERMY - Check that the diathermy is on.

GET YOUR ASSISTANT to retract the skin edge and make an incision on the left side of the xiphisternum down the mid-line around the right hand side of the umbilicus for 5 cms.

DEEPEN THE INCISION down to the linea alba.

INCISE the linea alba exactly in the mid-line from the upper part of the xiphsternum down to 5 cms. below the umbilicus. The peritoneum will bulge through.

PICK UP THE LINEA ALBA between two artery forceps and incise the peritoneum. Stand the incision on the peritoneum up along side the xiphisternum, diathermy and deal with any bleeder at the top end. Open the linea alba down to 5 cms. below the ulbilicus.

BY THE SKIN EDGE TOWEL - divide the calciform ligament if it is likely to get in the way. Divide adhesions carefully, particularly if there has been a previous operation for disease.

APPLY TOWEL CLIPS to the ends of the skin edge towels.

APPLY THE RETRACTOR with the gear leaver on your leaver.

OPEN THE WOUND and examine the intra-abdominal organs.

EXAMINE THE CONTENTS and free any adhesions and check that the diagnosis is correct. Find the ulcer and check the liver for metastases. Check the rest of the abdomen and pelvis for other

diseases and bleeding.

GET YOUR ASSISTANT to pull down on the transverse colon.

IDENTIFY THE GREATER OMENTUM and the gastroepiploic vessels in it.

ASSESS THE ADHERENCE of local tissues in particular the omentum the colic arteries, the pancreas. Benign ulcers usually produce some oedema and petechial marks on the serosa during this minor dissection. Use blunt dissection with finger or swab on a stick and be careful of the very friable colic vessels.

IDENTIFY THE FIBROUS SAC and divide the extra-layer of adhesions which is normally found here so as to demonstrate the back wall of the stomach clearly. It may be necessary at this point to free the ulcer from surrounding tissues - resection of them may be indicated if the lesion could be carcinomatous.

YOU SHOULD IDENTIFY NOW THE GREATER CURVE Clip and cut with artery clips the gastroepiploic vessels. There is no need to preserve this arcade since the stomach is due to be removed.

CONTINUE DIVIDING these vessels until you are above the diseased tissue or a typical lesser curve peptic type ulcer. Continue up to the beginning of the short gastric artery with a view to removing two thirds of the stomach. At this point choose a part of stomach which you can denude of vessels in anticipation of the resection.

TIE OFF THE VESSELS with 2 0 Ethicon W214. We have started this mobilisation in the middle of the greater omentum and are going around clockwise.

TURN TO THE DISTAL PART OF THE OPENING in the greater omentum and make your way down beyond the pylorus which you will recognise by palpation and the pre-pyloric vein of Mayo. This can be a very difficult dissection particularly if the operation is for a recurrent duodenal ulcer or a bleeding duodenal ulcer. Take your time here because these vessels are fragile and bleed very easily.

TURN TO THE LESSER OMENTUM and insert a Morris retractor.

INSERT A MORRIS RETRACTOR under the liver. Get your Assistant to retract the stomach downwards to display the lesser omentum. Usually the centre of it is filmy and you can make an opening into the lesser omentum which will allow you to first of all identify the vessels between the opening and the upper surface of the duodenum. Clear these vessels from the duodenum. Make sure you are not including the bile duct. If necessary expose the bile duct to be absolutely sure.

TIE OFF THE VESSELS and make sure you have freed the tissues behind the At this point lift up the transverse colon and look for the first part of the jejunum which will be found on the left side of the mesocolon. Be absolutely sure that you have the first part which will be seen coming from behind the mesocolon.

Next - you have to decide whether to do an anti-colic or a retro-colic anastomosis. If the colon and mesocolon are very large the simplest is to do a retro-colic anastomosis. Lift up the mesentery and make an opening 5 cms. in diameter in it suitable for the jejunum.

BRING THE JEJUNUM through the loop and tuck the colon back in the wound. For an anti-colic anastomosis go to Step No.

CLOSE THE DUODENUM Read on..

PUT TWO BIG PACKS AROUND THE PYLORUS to isolate them.

GIVE INTRAVENOUS Metronidazole 1 gram and Cefuroxime 1.5 grams.

APPLY A NON-CRUSHING CURVED CLAMP TO THE DUODENUM and apply a PAYR'S CLAMP to the pylorus. Squeeze out any liquid gas in the intervening bowel and place a swab behind the displayed bowel and cut the duodenum just beyond the ulcer.

TIE A LOOSE SWAB over the Payr's clamp and the pyloric stump to prevent contamination, and hold the clamp and the stomach up out of the way.

RETURN TO THE DUODENAL STUMP

CLOSE THE STUMP with a continuous 4/0 catgut. It is important that the dissection has been adequate here to make a closure easy. If there is great difficulty here, go to Step No..

REMOVE THE CLAMP Cover with interrupted 3/3 silk the inner duodenal closure layer. If the dissection of the duodenum has not been adequate this closure will be very difficult. You may need to re-dissect the tissues to obtain flexible duodenal tissues suitable for anastomosis. Make sure that you do not stray on to the pancreas. Place the stitches 7 mm apart. There should be no stress on the suture line. Use a half purse string stitch at the end of the closure line and make sure that the duodenum will invert at this point. If not you need to re-dissect the tissues or make a more definite half purse string stitch. Insert additional stitches to make sure that the outer layer of the closure appears sound.

TUCK THE DUODENAL STUMP out of site under the liver.

TURN TO THE UPPER RESECTION LINE

APPLY A DOYEN'S NON-CRUSHING CURVED CLAMP to the stomach above the planned resection line.

APPLY A SILK STITCH on the lesser curve tissues to act as a holding stitch if the stomach slips out of grip in the future. Apply the DOYEN'S CLAMP with the handle on the greater curve of the stomach. Apply one PAYR'S CLAMP to the greater curve of the stomach covering three cms. of stomach and place a swab behind that clamp and divide the stomach along the line of the Payr's clamp. Apply another Payr's clamp on the rest of the stomach and divide the stomach. Make sure that you have not included the naso-gastric tube in this resection. Remove the specimen.

CLOSE OFF THE WHOLE OF THE STOMACH with a continuous 4/0 stitch except for a 3 cm. gap on the greater curved side which will be used for the anastomosis. This is a full thickness suture line and is to be both haemastatic and waterproof.

APPLY INTERRUPTED 3/3 SILK STITCHES to close off this lesser curve suture line. Start with a half purse string stitch at the lesser curve and make sure that the inner suture line invaginates properly at this corner.

BRING THE LOOP OF JEJUNUM and apply a Doyen's clamp to it with the shortest possible length of afferent loop laid against the lesser curve of the stomach.

LIE THE TWO DOYEN'S CLAMPS side by side to enable the start of the anastomosis between the side of the jejunum and the side of the stomach.

DO THE OUTER LAYER of the posterior wall with a 3/0 silk and make sure that the back wall extends beyond the opening in the stomach, stitching the ends of the suture line first then returning to the intermediate parts of the suture line. This allows suitable planning of the anastomosis.

INCISE THE JEJUNUM 1 cm away from the stomach in the line of the stomach incision. Using a knife extend the incision to be equivalent to the opening in the stomach. You may get annoying bleeding here which can require stitching off. you may find a great deal of redundant mucosa which also can be excised. Clear any contents out of the jejunum. Take full thickness bites under direct vision of the stomach and the jejunum 7 mm apart and control the placing of each stitch with a dissecting forcep maintaining a 200 gram pull on the stitch. Start stitching with the 6441 and continue around the difficult end of the anastomosis which is the end towards the lesser curve. Make sure that you include bite on both sides of the stomach for security. Make all stitches under direct vision. Avoid the temptation to rush. Turn the corner at the lesser curve and apply a lock stitch. Return to the other needle. It is convenient to change the direction of your stitching by taking a reverse bite on one side as you go around the corner.

TIE OFF THE TWO ENDS OF CATGUT 4 throws 10 mm long.

REMOVE THE DOYEN'S CLAMPS.

STITCH THE FRONT WALL of the stomach with interrupted 2 0 silk Ethicon 333 7 mm apart to prevent any of the inner suture line tissues bulging through. There should be no pulling on the suture line or it may fail. If the tissues appear tight you should use a longer loop of jejunum, if you have done an anti-colic jejunal loop changing to a retro-colic loop will probably give you an extra 5-10 cms. of length. The bowel running to and from the stomach should not look kinked or twisted or there will be unsatisfactory emptying and duodenal hold-up. In the large fat patients the important thing is to have control of the lesser curve of the stomach which is the reason for the stay stitch.

CUT ALL THE LOOSE ENDS of the anterior suture line including the holding stitches and then examine the anastomosis for completeness.

EXAMINE THE ANASTOMOSIS for bleeding and also examine anastomosis to make sure that there is no obstruction between the gastro efferent stoma and the gastric afferent stoma. If there is any stenosis here you are in trouble and you would be best advised to re-do the anastomosis. Check now for any damage to other tissues, and check for bleeding, in particular from the spleen

CHECK that the naso-gastric tube is lying in the middle of the stomach remnant and has not been caught up in the suture line in the anastomosis.

REMOVE THE RETRACTOR and remove the skin edge towels.
Change gloves.

APPLY MOYNIHAN to the lateral side of the wound on each side.

INCISE THE SKIN Laterally

ARTERY FORCEPS through the abdominal wall and catch hold of the red rubber tube drain 1 cm in diameter. Stitch the drain in place with a No.2 silk stitch Ethicon W 4 throws four times around the tube sufficiently tightly to make a waist in it. Tie stitch with 4 throws and cut the ends 4 cms. long.

CLOSE THE MID-LINE with a continuous layer of Ethicon W749 5 throws on the knot and then cut 1 cm. long.

APPLY A SECOND LAYER of continuous Nylon to the anterior abdominal wall burying the ends after tying 5 throws.

APPLY 1 gram Ampicillin powder in the fat. Apply a fat stitch of continuous Ethicon W762.

INSERT A SUBCUTICULAR STITCH of continuous Vicryl 3 0 9472.

REMOVE THE STERILE DRAPE

FINAL TOUCHES

MAKE SURE THAT THE NASO-GASTRIC TUBE IS SECURED FIRMLY TO THE NOSE.

MAKE SURE THAT THE DRAIN IS CONNECTED FIRMLY TO THE BAG.