

## HOW I DO IT

# Cholechojejunostomy With Invagination of the Bile Duct Into the Jejunum

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In performing a cholechojejunostomy, the predominant technique is the apposition of the mucosa of the bowel to the mucosa of the biliary tract, which results in a high rate of postoperative strictures and leakages [1,2]. We recommend the invagination of the bile duct into the jejunum, using a modified mattress suturing technique.

A tension free-Roux-en-Y loop of jejunum is brought up against the bile duct for subsequent end to side anastomosis. The anastomosis begins at the posterior wall with the sutures passing through the jejunum from the outside inward (1 cm from the edge), to the bile duct from within outward and from the outside inward, at the same step (0.5 cm from the edge). This is completed by passing the needle through the gut from the inside outward and then tying these sutures serially, with the knots on the outside (Fig. 1). To make the anterior layer, the needle is passed from the outside into the intestine and

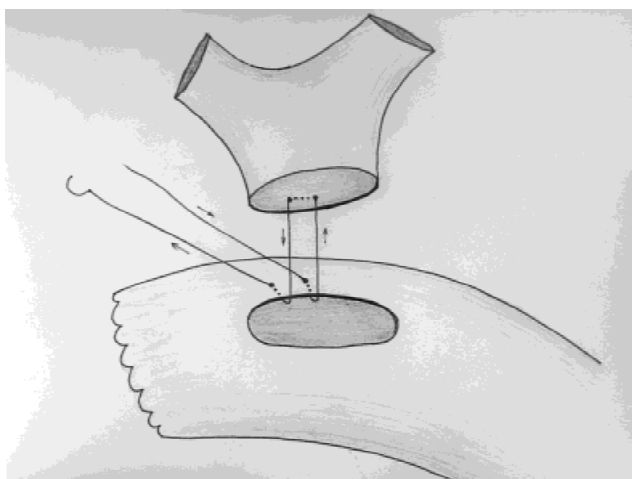


Fig. 1. The posterior layer begins with the sutures passing through the jejunum from the outside inward (1 cm from the edge), to the bile duct from the inside outward and from the outside inward (0.5 cm from the edge). This is completed by passing the needles through the gut from the inside outward and then tying these sutures serially. The posterior row of sutures is done with the knots tied on the outside.

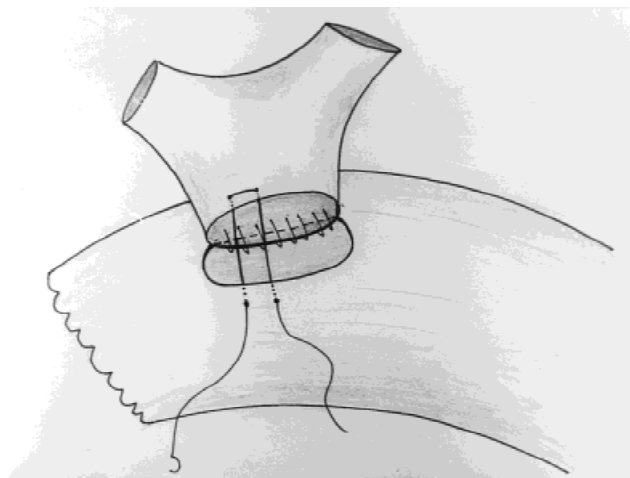


Fig. 2. The posterior layer is tied. The anterior suturing begins from the jejunum (from the outside inward, 1 cm from the edge) to the bile duct (from the inside outward and from the outside inward, 0.5 cm from the edge), followed by passing the suture from the inside outward of the intestine with the knots remaining outside.

then, from the inside outward and from the outside into the duct, followed by passing the suture from the inside outward in the intestine with the knots tied on the outside (Fig. 2). This procedure results in the serosa of the invaginated bile duct apposed and covered by the jejunal mucosa.

This suturing technique helps us to achieve a more leakage proof cholechojejunostomy with a lower degree of postoperative strictures.

## REFERENCES

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**COMMENTARY**

This is an interesting technical modification for anastomosis of the choledochus to a Roux-en-Y loop of jejunum. Theoretically, this modification should decrease the rate of postoperative leak at the anastomosis, but might be prone to a higher rate of stricture due to the invagination of the tissues it involves at the anastomotic line, particularly if the choledochus is not widely dilated from previous long-standing obstruction. The authors' experience, however, is that they have a lesser incidence of both leaks and strictures. The predominant anastomotic technique in the United States is that of a duct to mucosa anastomosis with interrupted sutures, using fine

bites on the wall of the choledochus and fine full thickness bites on the wall of the bowel with the knots tied on the outside. To avoid a leak or stricture: (1) the edges anastomosed should have a good blood supply, (2) there should be no tension at the anastomosis, and (3) accurate apposition of the edges should be effected. Whether the invagination technique offered above is better than the ordinary duct to mucosa anastomosis cannot be resolved on theoretical reasoning. It will require the results in terms of both leaks and strictures for a substantial number of patients following each of the above two methods of biliointestinal anastomosis.

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