Journal of Visceral Surgery (2018) xxx, xxx–xxx

Available online at
ScienceDirect
www.sciencedirect.com

Elsevier Masson France
EM|consulte
www.em-consulte.com/en

SURGICAL TECHNIQUE

Duodenal repair with a jejunal pedicle graft

T. Bensignor*, A. Rault, J. Dubrez

Service de chirurgie digestive & générale, hôpital Foch, 40, rue Worth, 92150 Suresnes, France

Introduction

The duodenum is a complex anatomic crossroad between the stomach to the jejunum that enfolds the pancreas and receives the biliary and pancreatic secretions. Duodenal injuries with loss of substance of the intestinal wall are difficult to repair because of limited mobility, tenous vascularization, and the presence of bilio-pancreatic secretions. Defects of the duodenal wall can be caused by trauma, resection of a duodenal tumor, or by extrinsic invasion by tumor.

Direct repair of a duodenal wall defect is often difficult or even impossible if there is loss of substance of several centimetres. Available solutions include intubation of the perforation with a Levy helicoidal drain, urgent pancreato-duodenectomy (PD) for trauma, or elective PD. Other techniques have been proposed including jejunal patch with an adjacent limb or with a Roux-en-Y limb, or the modified Grégoire technique [1].

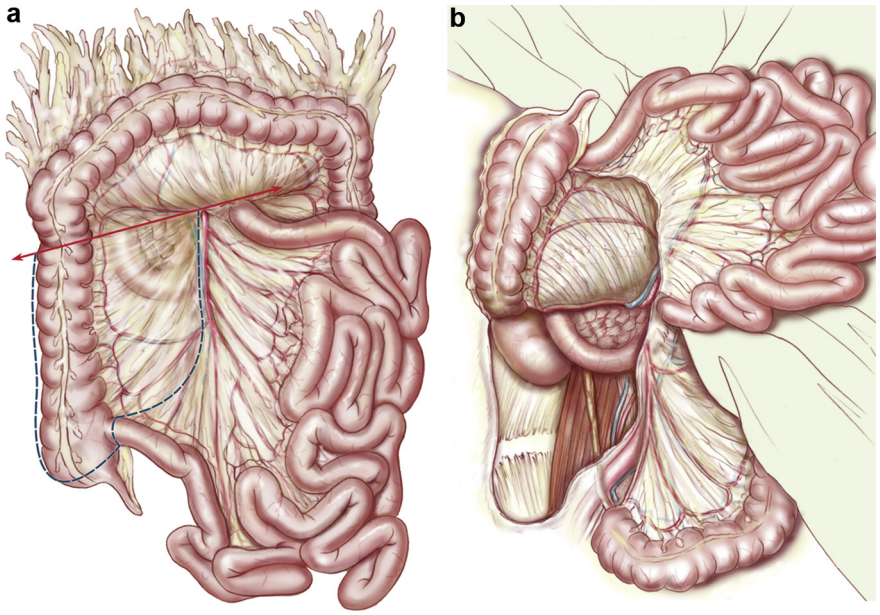
We propose the use of a pedicled jejunal flap as originally described by De Shavo et al.; we find this has the advantage of bridging the duodenal wall defect while respecting the conformational anatomy of the duodeno-pancreatic junction, unlike Roux-en-Y limbs, while avoiding the morbidity of a PD [2]. This technique is not suitable for right colon cancerous invasion of the duodenum, nor is any other type of direct repair. In such cases, PD is the best approach and has better long-term oncologic results [3].

In this surgical technique, we describe the pedicled jejunal flap technique to bridge a duodenal wall defect after resection of a benign duodenal lesion via the open laparotomy approach.

* Corresponding author.
E-mail address: thierry.bensignor@gmail.com (T. Bensignor).

https://doi.org/10.1016/j.jviscsurg.2018.02.008

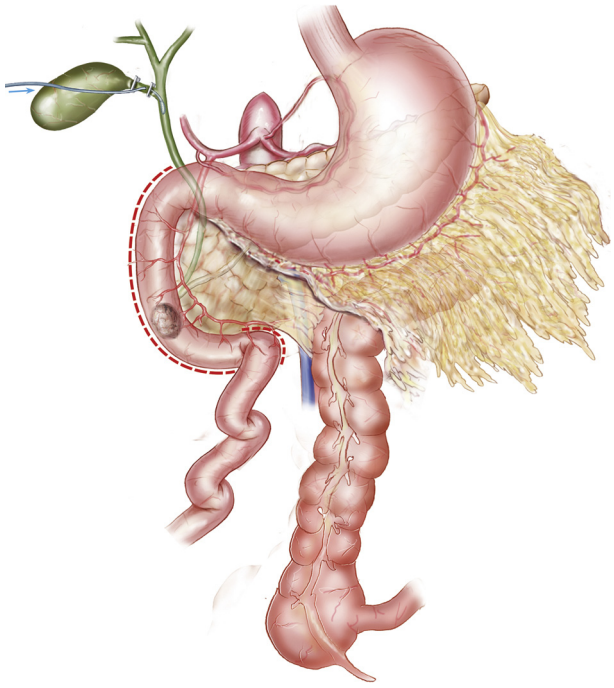
Please cite this article in press as: Bensignor T, et al. Duodenal repair with a jejunal pedicle graft. Journal of Visceral Surgery (2018), https://doi.org/10.1016/j.jviscsurg.2018.02.008



1 Creation of a common mesentery configuration

The first stage of the procedure consists of a Cattell-Braasch manoeuvre creating a common mesentery for the digestive tube [4]. The right colon and transverse colon must be completely mobilized and reflected to the left of the midline with liberation of the root of the mesentery all the way to the fourth portion of the duodenum. The ligament of Treitz is then divided to facilitate rotation of the mesentery beneath the right colon, resulting in a straight trajectory of the duodenum beyond its second portion.

This alternative to the initial description by DeShazo et al. [2] who used a trans-mesocolic route seems to function better since it avoids any traction of the mesentery.



2 Kocher manoeuvre

A complete Kocher manoeuvre is then performed mobilizing the duodenal C-loop and head of the pancreas. The gallbladder is removed and a drain is inserted through the cystic duct into the common bile duct to help identify the papilla and its position relative to the lesion. This drain will be left in place at the end of the procedure.

Please cite this article in press as: Bensignor T, et al. Duodenal repair with a jejunal pedicle graft. Journal of Visceral Surgery (2018), https://doi.org/10.1016/j.jviscsurg.2018.02.008