Chapter 19

Duodenopancreatectomy for Gastric Cancer

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Introduction

Duodenopancreatectomy for gastric cancer is a well recognized surgical procedure essentially motivated by the need for a radical approach in cases of neoplasms infiltrating the head of the pancreas [1-3]. Despite the indications of various Japanese authors [4] we believe that total gastrectomy should be associated with duodenopancreatectomy [5] with the aim of achieving a R3 resection [6-9]. Nevertheless some clinical situations do require duodenopancreatectomy not only for oncological reasons. The following case report represents such a problem.

Clinical Description

An 82 year old man presented with anaemia (Hb 9 g/dl, RBC 2.5 x 10^{12}/l and haematocrit 22%). Endoscopy demonstrated the presence of a stenotic haemorrhagic neoplastic lesion on the posterior wall of the gastric antrum.

No lesions were noted on ultrasound in the liver, biliary tract or pancreas. Urgent surgery was necessary because of continued bleeding.

At operation a gastric neoplasm infiltrating the head of the pancreas was seen and a duodenopancreatectomy with a wide gastric resection performed. The pancreatic stump was sutured using a linear stapler. A low flow pancreatic fistula appeared on the fifth postoperative day. The patient died 3 months later of respiratory failure.
Surgical Technique

A bilateral subcostal incision was made. A bulky neoplastic mass was seen in the abdomen arising from the posterior surface of the stomach infiltrating the pancreas and partially involving the wall of the superior mesenteric vein. The posterior surface of the pancreatic isthmus was dissected from the portal vein and the pancreatic body sutured using a 60 mm linear stapler, separated using a lancet from the head following the stapler's cartridge.

The superior mesenteric vein wall which was adherent to the neoplasm was resected and sutured. The intestine was derotated and the ligament of Treitz freed after an accurate dissection of the duodenum and part of the root of the mesentery together with dissection of the ascending colon from the posterior abdominal wall allowing a clear view of the duodenojejunal loop thus making the duodenal and pancreatic resection easier to perform. The jejunum was severed between the first and second loop using a stapler and cut device. Since the cystic duct was very thin a laterolateral cholecystojejunostomy with the jejunal stump was carried out. Next using a 90 mm linear stapler a wide gastric resection was performed, yielding a specimen which included 2/3 of the stomach, head of the pancreas, duodenum and first loop of jejunum. A laterolateral gastrojejunostomy was performed using a stapler and cut device to complete the operation.

Discussion

Duodenopancreatectomy in this patient controlled the clinical emergency and also resulted in complete macroscopic removal of the tumour, although this finding could not be confirmed because of the short follow-up. A pancreatojejunal anastomosis was not performed because of the friability of the pancreatic tissue (the pancreatic stump was of normal texture) and the reduced diameter of the pancreatic duct. In these circumstances the suture of the pancreatic stump using a stapling device was preferred. The operation is simple, quick and although complications are frequent these usually have a favourable course. Based on our experience a dehiscence of a stapled suture leads to a pure pancreatic fistula, which is generally less dangerous than a pancreatojejunal anastomotic leakage which has a high mortality rate.