

Chapter 26

Open Distal Pancreatectomy



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Overview

- Divide gastrocolic ligament to enter lesser sac
- If preserving spleen, dissect splenic artery and vein off superior border of pancreas
- If performing concomitant splenectomy, take splenocolic, gastrosplenic, splenophrenic, splenorenal ligaments down
- Determine transection point of pancreas, and divide pancreas
- Ligate splenic artery and vein if performing splenectomy

Clinical Pearls

- Gastrosplenic ligament is only splenic ligament that contains vasculature
- Dividing splenophrenic ligament allows spleen to remain retracted while dissection is carried out

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- If patient has chronic pancreatitis, avoid stapling across pancreas, and oversew to avoid pancreatic leaks
- JP drain placement is attending dependent

Patient Positioning

The patient is placed supine with both arms extended.

It is important to prep the skin to the level of the nipples.

Anesthesia

General endotracheal anesthesia is needed.

An epidural catheter or US-guided long-acting anesthetic blocks may be used to assist with pain control.

Vaccines against encapsulated bacteria should be administered if a concurrent splenectomy is to be performed. Patients should receive the vaccines on the day of discharge or 14 days post-op (whichever comes first).

A foley catheter is placed for close urine output measurement.

Operative Steps

1. An upper midline laparotomy or left subcostal incision is made.
2. The entire abdomen is explored and inspected for any evidence of metastatic disease. Close attention should be paid to examining and palpating the liver. Any suspicious lesions should be biopsied and sent for frozen section. If a frozen section shows evidence of metastasis, surgical resection should not be pursued.
3. A fixed retractor is placed (a Thompson retractor provides excellent exposure but a variety of other retractors can be used such as a Bookwalter, Omni-tract, Balfour etc.).
4. The lesser sac is entered after dividing the gastrocolic ligament, exposing the pancreas.

5. The lesion is palpated or assessed with the US intraoperatively to delineate the exact borders and confirm the location and resectability with the chosen procedure.

Spleen-Preserving Distal Pancreatectomy

1. The superior border of the pancreas is dissected proximal to the lesion of interest to isolate the splenic artery and the vein. For a spleen-preserving distal pancreatectomy, small tributaries from the splenic artery and the vein need to be meticulously ligated or clipped to completely free the tail of the pancreas from the vascular bundle.
2. The inferior border of the pancreas is then dissected.
3. The plane of transection is confirmed and a tunnel is created. Two stay sutures can be placed at the superior and inferior border of the pancreatic remnant to facilitate with hemostasis (Fig. 26.1).

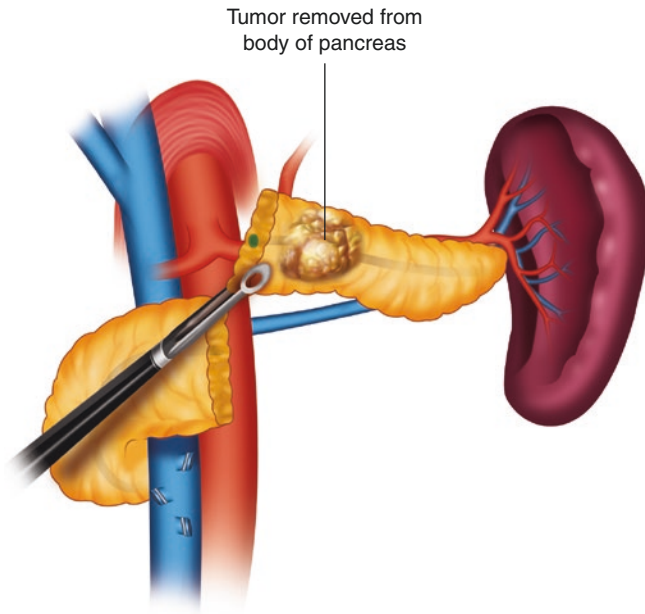


FIGURE 26.1 Spleen preserving distal pancreatectomy

In Cases of Combined Splenectomy

1. It is often challenging to preserve the spleen due to intimate relationship of splenic artery and vein to the pancreatic parenchyma.
2. Additionally, the spleen should not be preserved in case of tumor involvement of the splenic vasculature or evidence of splenic vein thrombosis.
3. The splenophrenic, splenocolic, splenorenal, and gastro-splenic ligaments are divided.
4. The gastrosplenic and splenocolic ligaments contain the short gastric vessels and the left gastroepiploic vessels and careful hemostasis is obtained, usually with an advanced energy device (bipolar or ultrasonic dissector) or with suture ligation.
5. The spleen is fully mobilized and retracted medially.
6. The splenic vasculature is approached and isolated from the posterior aspect of the pancreas as spleen is medialized.
7. A vascular stapler load may be used to seal the splenic artery and vein or may be suture ligated. The splenic artery should be divided first to minimize blood loss and to drain the blood from the spleen.
8. The midline laparotomy is closed in a standard fashion. The chevron incision is closed in two layers.

For both a spleen-preserving and a non-preserving distal pancreatectomy, there are several ways to divide the pancreas parenchyma including stapling devices, division with an electrocautery device or scalpel and oversewing the parenchyma with full thickness sutures.

Careful hemostasis is obtained and wound is irrigated.

The decision to place a drain depends on the surgeon preference and also based on the texture of the pancreas, the size of the pancreatic duct and the type of pathology treated.