

Totally Robotic Distal Pancreatectomy with Preservation of Spleen and Splenic Vessels

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Introduction

A 67-years-old man underwent a total right robot-assisted nephrectomy for “clear cell” renal carcinoma (pT1a, UICC 2009). Imaging studies showed a pericentimetric hypervascular lesion of the tail of the pancreas of undetermined significance.

A totally robotic distal pancreatectomy with preservation of spleen was performed.

After the induction of general anaesthesia, the patient was placed in right lateral decubitus, flexed at the waist. An “open” left subcostal access was used to introduce a 12 mm optical trocar. The abdomen was insufflated with CO₂ (12 mmHg). Under laparoscopic vision (0° scope) other 4 trocars were introduced: two 8 mm left subcostal trocars for robotic arms describing a semicircle around the left subcostal space with the previous introduced 12 mm optical trocar, one 5 mm and one 12 mm trocars for the first-assistant in a lower left subcostal position. The robot (da Vinci[®] Si Surgical System, Intuitive Surgical) was placed at the patient’s left shoulder and was docked.

The first step of the procedure was the incision of the splenocolic ligament. Then the gastrocolic and gastrosplenic ligaments were opened exposing the anterior and superior face of the pancreas. The inferior face of the pancreas was dissected from the transverse mesocolon.

The splenic artery was identified on the posterior-inferior face of the pancreas and mounted on a silicon loop. Articulated instruments allowed to accurately dissect and clipping or coagulating pancreatic branches.

The splenic vein was identified and gently dissected using monopolar hook. The tail of the pancreas was carefully dissected from the splenic hilum in order to preserve the spleen and the splenic vessels. The distal pancreas was sectioned using Ultracision[®] (Harmonic, Ethicon Endo-

Surgery). The pancreatic stump is treated with 4 separate “X stitches” (PDS 3/0).

The excised tissue was put in a specimen bag and extracted through the 12 mm first-assistant’s port.

The overall operative time was 2 hours and 45 minutes. The patient showed no post-operative complications.

Final histology showed a good differentiated neuroendocrine tumor of the tail of the pancreas, 8 mm in its maximum diameter, R0 resection, G1 (OMS 2010), pT1N0 (UICC 2009).

Conclusion

Distal pancreatectomy is mainly indicated for benign or borderline tumors of the pancreatic body and tail [1]. Since for these tumors are no indications for lymph node dissections, there are benefits for the patient if the spleen is preserved. The best spleen preservation is achievable by the preservation of the splenic vessels while selectively controlling their pancreatic branches [2]. Even though it is more technically demanding procedure than a distal spleno-pancreatectomy, the da Vinci[®] Surgical System is very helpful in performing a meticulous vascular dissection allowing for the preservation of the splenic vessels [3]. In some particular conditions articulated instruments, 3D vision, and ergonomic position of the surgeon powered by the robotic system allow to perform a safe and very accurate dissection unlikely achievable using the conventional laparoscopic approach.

References

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