



Robotic Enucleation of Pancreatic Head Insulinomas in Close Proximity to the Pancreatic Duct

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ABSTRACT

Background. Insulinomas are rare pancreatic neuroendocrine tumors for which the main curative treatment is surgical resection. Enucleation is preferred over pancreatoduodenectomy to minimize morbidity and function loss.¹ Robotic-assisted surgery offers improved versatility and less blood loss than laparoscopic surgery for pancreatic enucleation.^{2–4} Our video describes the technique for robotic enucleation of pancreatic head insulinomas in close proximity to the pancreatic duct.

Patients and Methods. The video describes the presentation, diagnostic imaging, and technical aspects of the surgical approach in two patients with pancreatic head insulinomas that underwent robotic enucleation.

Results. Case one was a 76-year-old woman who experienced syncope for 2 months. Case two was a 61-year-old man, previously treated for renal cancer, who had documented hypoglycemic symptoms. Computed tomography (CT) scan and magnetic resonance imaging (MRI) identified a 1.5 cm and 1.2 cm pancreatic head mass, respectively. Both patients presented with low glucose levels, and elevated C-peptide and proinsulin. In both cases, endoscopic retrograde cholangiopancreatography (ERCP) and pancreatic duct stent placement were performed the same day of surgery for intraoperative identification and preservation of the duct. Robotic enucleation of the masses was performed, and an ultrasound was used to identify the masses and relation with main pancreatic duct. Pathology revealed a

well-differentiated neuroendocrine tumor in both cases. The patient's postoperative course was uneventful, and they were discharged on day 5. Successful resolution of hypoglycemic events occurred in both patients.

Conclusion. Robotic enucleation is a safe and feasible option for treating pancreatic head tumors in challenging locations. Intraoperative ultrasound is an essential tool for the successful robotic enucleation of pancreatic head tumors.

SUPPLEMENTARY INFORMATION The online version contains supplementary material available at <https://doi.org/10.1245/s10434-023-14627-5>.

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