



Laparoscopic Pancreatic Head Preserving Total Duodenectomy: The Parenchymal Sparing Alternative to a Whipple

Eduardo A. Vega, MD¹, Omid Salehi, MD¹, Diana C. Nicolaescu, MD², Sandeep Krishnan, MD³, Sylvia V. Alarcon, MD⁴, Olga Kozyreva, MD⁴, Svetlana Kondratiev, MD⁵, Usha Vellayappan, MD⁶, Horacio J. Asbun, MD⁷, and Claudius Conrad, MD, PhD¹

¹Department of Surgery, St. Elizabeth's Medical Center, Tufts University School of Medicine, Boston, MA; ²Medical Doctoral School, Tulcea Emergency Hospital, IOSUD Titu Maiorescu University of Bucharest, Bucharest, Romania; ³Department of Gastroenterology, St Elizabeth's Medical Center, Boston, MA; ⁴Dana Farber Cancer Institute, Harvard Medical School, Boston, MA; ⁵Department of Pathology, St. Elizabeth's Medical Center, Boston, MA; ⁶Department of Anesthesia, St. Elizabeth's Medical Center, Boston, MA; ⁷Division of Hepatobiliary and Pancreas Surgery, Miami Cancer Institute, Miami, FL

ABSTRACT

Background. When endoscopic options fail, laparoscopic pancreatic head-preserving duodenectomy (LPHPD) for benign duodenal lesions is a parenchymal sparing and safe alternative to a pancreaticoduodenectomy.^{1–3} LPHPD may be the optimal “amount” of surgery, because such lesions are at risk for undertreatment (partial endoscopic resection associated with recurrence) or overtreatment (Whipple associated with morbidity and loss of pancreatic parenchyma).^{4,5}

Patient. A 80-year-old, healthy female patient was diagnosed endoscopically with two, flat, symptomatic adenomas (7-cm D2; 2-cm D3). She had no family history of polyposis. Germline testing, tumor markers, and colonoscopy did not show any abnormality.

Technique. With the patient in French position, a wide laparoscopic Kocherization was performed past IVC and

aorta. Following prepyloric gastric transection, the entire duodenum was carefully dissected off the pancreas. After transection of the proximal jejunum, the reconstruction begins. A two-layer, duct-to-mucosa, ampullary-jejunal anastomosis and a type II Billroth gastrojejunostomy were performed.

Conclusions. LPHPD avoids under- or overtreatment of benign duodenal lesions unamenable to an endoscopic approach. If the stepwise approach described in this video is followed, LPHPD represents a safe and parenchymal-sparing alternative to pancreaticoduodenectomy for benign duodenal lesions with reduced morbidity.

FUNDING No external or internal funding was used.

DISCLOSURE None of the authors have declared any conflict of interest.

Oral Presentation Americas Hepato-Pancreato-Biliary Association Annual meeting 2020, Miami, FL.

Electronic supplementary material The online version of this article (<https://doi.org/10.1245/s10434-020-08715-z>) contains supplementary material, which is available to authorized users.

© Society of Surgical Oncology 2020

First Received: 20 March 2020;
Published Online: 14 June 2020

C. Conrad, MD, PhD
e-mail: claudius.conrad@steward.org

REFERENCES

1. Müller MW, Dahmen R, Königer J, et al. Is there an advantage in performing a pancreas-preserving total duodenectomy in duodenal adenomatosis? *Am J Surg.* 2008;195(6):741–8.
2. Eisenberger CF, Knoefel WT, Peiper M, et al. Pancreas-sparing duodenectomy in duodenal pathology: indications and results. *Hepatogastroenterology.* 2004;51(57):727–31.
3. Farnell MB, Sakorafas GH, Sarr MG, et al. Villous tumors of the duodenum: reappraisal of local vs. extended resection. *J Gastrointest Surg.* 2000;4(1):13–23.
4. Yamashita S, Overman MJ, Wang H, et al. Pathologic response to preoperative therapy as a novel prognosticator for ampullary and duodenal adenocarcinoma. *Ann Surg Oncol.* 2017;24(13):3954–63.

5. Kutlu OC, Lee JE, Katz MH, et al. Open pancreaticoduodenectomy case volume predicts outcome of laparoscopic approach: a population-based analysis. *Ann Surg.* 2018;267(3):552–60.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.