



Robotic Pancreaticoduodenectomy with ‘SMA-First Approach (Posterior and Right Medial)’ and ‘Triangle Operation’

Manish S. Bhandare, MS, MCh, PDF[✉], Gurudutt P. Varty, MS, DNB, MCh,
Vikram A. Chaudhari, DNB, PDF, and Shailesh V. Shrikhande, MS, MD, FRCS

Gastrointestinal and HPB Surgical Oncology, Department of Surgical Oncology, Tata Memorial Centre, Homi Bhabha National Institute, Mumbai, India

ABSTRACT

Background. Notable improvements in pancreatic cancer surgery have been due to utilization of the superior mesenteric artery (SMA)-first approach¹ and triangle operation (clearance of triangle tissue between origin of SMA and celiac artery).² The SMA-first approach was originally defined to assess resectability before taking the irreversible surgical steps. However, in the present era, resectability is judged by the preoperative radiology, and the benefit of the SMA-first approach is by improving the R0 resection rate and reducing blood loss. The basic principle is to identify the SMA at its origin and in the distal part, to guide the plane of uncinete dissection. This video demonstrates the combination of the posterior and right medial SMA-first approach along with triangle clearance during robotic pancreaticoduodenectomy (RPD).

Methods. The technique consisted of early dissection of SMA from the posterior aspect, by performing a Kocher maneuver using the ‘posterior SMA-first approach’. The origin of the celiac artery, along with the SMA, was defined early in the surgery. During uncinete process dissection, the ‘right/medial uncinete approach’ was used to approach the SMA. ‘Level 3 systematic mesopancreatic dissection’ was performed along the SMA,³ culminating in the ‘triangle operation’.²

Results. The procedure was performed within 600 min, with a blood loss of 150 mL and no intraoperative or post-operative complications. The final histopathology report

showed a moderately differentiated adenocarcinoma (pT2, pN2), with all resection margins free.

Conclusion. The standardized technique of the SMA-first approach and triangle clearance during RPD is demonstrated in the video. Prospective studies should further evaluate the benefits of this procedure.

SUPPLEMENTARY INFORMATION The online version contains supplementary material available at <https://doi.org/10.1245/s10434-024-15181-4>.

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M. S. Bhandare, MS, MCh, PDF
e-mail: manishbhandare@gmail.com

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