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Il Giornale di Chirurgia
Journal of the Italian Surgical Association

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Circular-stapled bilio-digestive anastomosis during pancreatoduodenectomy

Video description of a standardized surgical technique in selected cases of pancreatic cancer

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Pancreatoduodenectomy (PD) still represents one of the main therapeutic options for pancreatic cancer. Of note, morbidity remains high (40%–50%).[1] Among surgical steps, bilio-digestive anastomosis (BDA) can be considered one of the most challenging, with biliary leakage and strictures occurring in 5%–8% of cases.[2] The most-used technique consists in a hand-sewn anastomosis with a tutoring stent in cases with high-risk features. That said, strides have been made to improve this outcome of PD. Following the principles of colorectal surgery, the use of mechanical devices in BDA has been proposed: the risk of discontinuity along the anastomotic suture line as well as the ischemic insult to the biliary stump should be reduced; technical variability could be avoided with a potential leap towards standardization. Mechanical BDA was introduced for palliative cholecystojejunostomy in patients with unresectable pancreatic carcinoma,[3] and it spreads in pediatric surgery for the treatment of congenital choledochal cyst. Its use in oncological surgery has not been proven yet; that said, small series[4,5] reporting their successful experience of mechanical BDA may indicate technical feasibility and safety. In this video [online] we describe the use of a circular 21-mm EEA stapler to perform a mechanical BDA. In expert hands, this technique may be indicated in very selected cases of resectable pancreatic tumors of the ampullar region (proximal margin at least 3 cm away from the biliary confluence) causing marked dilation of BD (at least 2 cm) with upfront surgical indication. Further studies as well as adequate technology are eagerly needed.

Acknowledgments

All the Authors have made substantial contributions to the acquisition of data, analysis and interpretation of data. All have contributed in drafting the article or revising it critically for the approval of the final version submitted.

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The authors declare that they have no conflicts of interest with regard to the content of this report.

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Journal of the Italian Surgical Association (2022) 42:4

Received: 1 August 2022; Accepted 26 August 2022

Published online 27 October 2022

http://dx.doi.org/10.1097/IA9.0000000000000008