

## LETTER

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# The “Hanging Maneuver” Technique during Pancreaticoduodenectomy: The Result of a Technical Evolution to Approach the Superior Mesenteric Artery

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Dear Sir,

We read with great interest the article by Kurosaki *et al.* [1] recently published in Journal of Pancreas, entitled “Left posterior approach to the superior mesenteric vascular pedicle in pancreaticoduodenectomy for cancer of the pancreatic head”. First, we want to congratulate the authors for the excellent results obtained with the left posterior approach, concerning the improved survival time and the decreased local recurrence rate as compared to the control group. These emphasize the utmost importance of a standardized en-bloc surgical resection which allows the achievement of better oncological results, particularly in a field where surgery still plays a preponderant role between the different therapeutic options. However, as the author only partially cited our technique, some comments seem necessary to better clarify our surgical approach to the superior mesenteric artery and especially the evolution which has characterized the technique since its introduction in 2003 [2].

The original posterior approach to the artery with en-bloc retroperitoneal pancreatic tissue ablation was standardized in order to increase the number of R0 resections and to extend the circumferential resection margins [3]. Later on, based on our experience, we modified the original technique adding new surgical

tricks to facilitate and standardize the surgical dissection and easily control the SMA. The posterior approach can be technically demanding in some cases, especially in obese patients [4]. We recently described a combination of the posterior and the anterior approach to the superior mesenteric artery with a “hanging maneuver”, which finally blends the advantages of both approaches [5]. In fact, the initial dissection at the origin of the superior mesenteric artery allows easier identification and preservation of the replaced right hepatic artery and rapidly gives clear information on the posterior extension of the tumor and its resectability. The left anterior aspect of the superior mesenteric vein is successively dissected and the superior mesenteric vein is gently retracted to the right. At this time, the first jejunal vein is often isolated and ligated allowing a safe approach to the distal part of the superior mesenteric artery and its distal branches. Finally, a tape is passed along the superior mesenteric artery from its origin on the aorta up to its emergence in the mesentery, “hanging” retroperitoneal pancreatic tissue. The traction on the tape pulls the retroperitoneal pancreatic tissue to the right side, resulting in a better exposure of the superior mesenteric artery, facilitating the dissection at the origin of all its proximal branches. Even though data concerning survival are not available, thanks to this combined approach we were able to reduce the rate of R1 resections as compared to our previous experience [5]. Furthermore, in cases of bleeding, temporary hemostasis can be achieved with lifting of the tape by the assistant, allowing the surgeon to achieve selective and definitive hemostasis.

In conclusion, independently of the surgeon’s preferred approach, the spread and standardization of superior mesenteric artery first dissection seems of utmost importance in order to reduce R1 resections, increase survival and improve the transmission of high level oncological practice.

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