Splenectomy via the posterolateral approach in ovarian cancer

Libing Xiang, Yulian Chen, Yixuan Liu, Zhihua Huang, Rongyu Zang

Ovarian Cancer Program, Department of Gynecologic Oncology, Zhongshan Hospital, Fudan University, Shanghai, China

Correspondence to
Dr. Rongyu Zang, Department of Gynecologic Oncology, Zhongshan Hospital Fudan University, Shanghai, China; zang.rongyu@zs-hospital.sh.cn

LX and YC contributed equally.

Accepted 10 April 2023

Splenectomy is the second most common upper abdominal procedure in ovarian cancer,[1] due to metastatic tumors in the splenic capsule, pedicle, or parenchyma. Pancreatic damage, resulting in a pancreatic fistula, is not uncommon after splenectomy, especially in patients who underwent concomitantly distal pancreatectomy.[2] This is because the tail of the pancreas often abuts the splenic hilum and metastatic tumors in the splenic hilum could obscure the tail of the pancreas. In this video, we introduce the technique of splenectomy via the posterolateral approach, which may facilitate detaching the pancreatic tail from the splenic hilum and aid in diminishing pancreatic damage.

The key points of the procedure are summarized as follows: (1) Retracting the spleen cephalad, transection of the splenocolic ligament. (2) Retracting the spleen laterally, dissection of the gastrosplenic ligament and the short gastric vessels. (3) Retracting the spleen caudad, dissection of the splenophrenic ligament. (4) Retracting the spleen medially, dissection of the splenorenal ligament. (5) Rotate the spleen medially and ventrally to access the posterior aspect of the spleen. Identify the tail of the pancreas and then

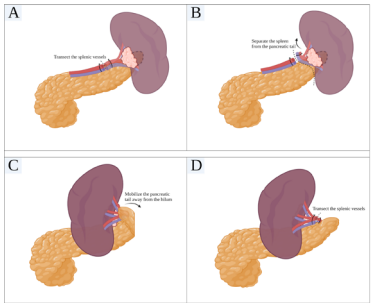
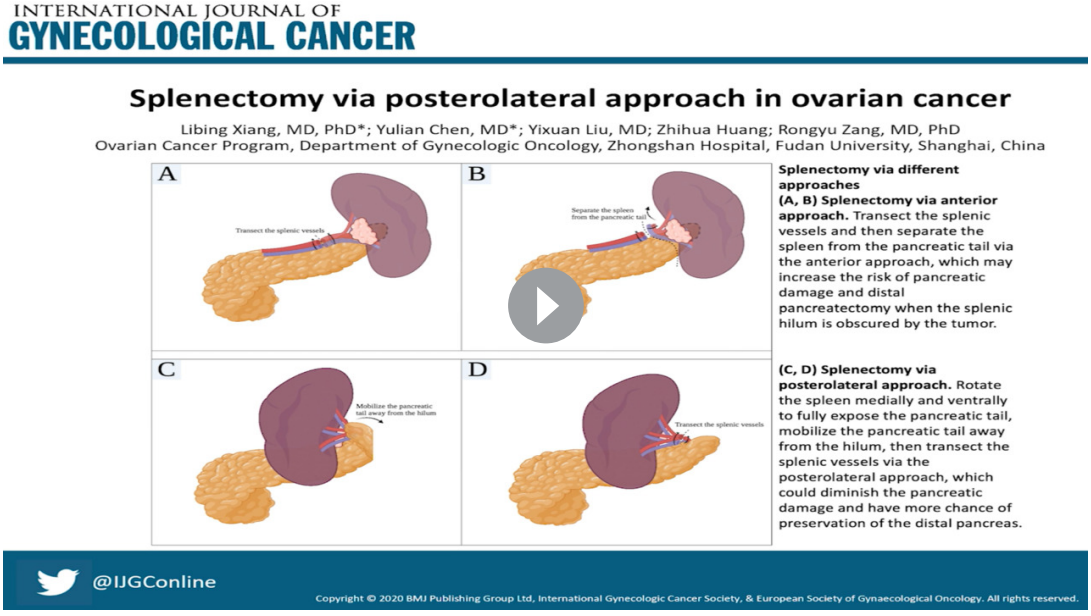


Figure 1 Splenectomy via different approaches. (A, B) Splenectomy via the anterior approach. Transect the splenic vessels and then separate the spleen from the pancreatic tail via the anterior approach, which may increase the risk of pancreatic damage and distal pancreatectomy when the splenic hilum is obscured by the tumor. (C, D) Splenectomy via the posterolateral approach. Rotate the spleen medially and ventrally to fully expose the pancreatic tail, mobilize the pancreatic tail away from the hilum, then transect the splenic vessels via the posterolateral approach, which could diminish the pancreatic damage and have more chance of preservation of the distal pancreas.



Video 1 Splenectomy via the posterolateral approach in ovarian cancer

To cite: Xiang L, Chen Y, Liu Y, *et al. Int J Gynecol Cancer* Published Online First: [please include Day Month Year]. doi:10.1136/ijgc-2023-004303

mobilize it away from the splenic hilum with caution. The yellowish pancreatic tissue is bounded by a thin capsule, distinguished from the surrounding visceral fat. (6) Ligate and transect successively the splenic artery and vein close to the spleen. (7) Divide the remaining soft-tissue attachments and remove the spleen.

With this method, compared with splenectomy by the anterior approach,[3] the splenic vessels and the tail of the pancreas were fully exposed from the posterolateral side. This procedure allows for separating adequately the pancreatic tail from the splenic hilum, which could keep the pancreas intact and have more chance of preserving the distal pancreas during the splenectomy.

Acknowledgements We would like to express our sincere gratitude to Dr. Yiting Jiang for the illustrations in the video, and to Dr. Wei Fan for participating in the surgery.

Contributors LX, YC, and RZ were responsible for the concept and design of this surgical video and the manuscript. LX and ZH performed the surgery and took the surgical video. LX, YC, YL, and ZH wrote the manuscript and edited the video. RZ reviewed the manuscript. LX was responsible for the overall content as the guarantor. All authors have approved the final manuscript.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Consent obtained directly from patient(s)

Ethics approval This study involves human participants. This surgical video study is exempted by the ethics committees of Zhongshan Hospital, Fudan University. Participants gave informed consent to participate in the study before taking part.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement All data relevant to the study are included in the article.

ORCID iD

Yulian Chen http://orcid.org/0000-0002-6741-8503

REFERENCES

1 Chi DS, Zivanovic O, Levinson KL, *et al*. The incidence of major complications after the performance of extensive upper abdominal surgical procedures during primary cytoreduction of advanced ovarian, tubal, and peritoneal carcinomas. *Gynecol Oncol* 2010;119:38–42.
2 Bizzarri N, Korompelis P, Ghirardi V, *et al*. Post-operative pancreatic fistula following splenectomy with or without distal pancreatectomy at cytoreductive surgery in advanced ovarian cancer. *Int J Gynecol Cancer* 2020;30:1043–51.
3 Acosta-Torres S, Fader AN. Laparoscopic splenectomy for secondary cytoreduction of ovarian cancer in a woman with localized splenic recurrence. *Gynecol Oncol* 2020;156:744–5.