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Invited Commentary

Commentary on "comparison of totally laparoscopic total gastrectomy and laparoscopic-assisted total gastrectomy: A systematic review and meta-analysis"

Dear Editor

We read the recent meta-analysis by Zhao et al. with great interest [1]. In this meta-analysis, they compared the surgical outcomes between totally laparoscopic total gastrectomy (TLTG) and laparoscopic-assisted total gastrectomy (LATG) and demonstrated TLTG is a technical safe procedure with better cosmesis, lower invasiveness, and faster recovery. We would like to congratulate the authors on this impressive and inspiring work. Herein, we would like to discuss the methodology and the interpretation of the findings of this study.

Firstly, the primary concern of the study is the anastomosis styles of TLTG as the researchers pooled studies with different intracorporeal esophagojejunostomy methods including side-to-side anastomosis using the linear stapler, end-to-side anastomosis using the circular stapler, and hand-sewn anastomosis et al. A subgroup analysis based on different anastomosis methods may improve the strength of the meta-analysis. The discrepancy lying in the intracorporeal esophagojejunostomy suggests the surgeons are exploring and ameliorating this immature procedure. Actually, the choice of intracorporeal esophagojejunostomy methods usually depends on surgeons' technical expertise and preference. Several previous studies attempted to find out the pros and cons of these anastomosis styles on surgical complications and principles of radical resections [2,3]. However, the conclusion remains unsettled and large sample size studies are warranted to provide convincing results given the low incidences of anastomosis-related complications.

Secondly, although, the researchers demonstrated no difference of postoperative complication between TLTG and LATG, no difference didn't mean equal and the result should be interpreted more cautiously. Studies included by the meta-analysis reported huge ranges of complication rates both in TLTG and LATG (0–36.3% in TLTG and 4.3% ~32% in LATG). We figured out a number of studies with less than 30 cases in one arm were included which may causing a fluctuation of postoperative complication rate. Furthermore, the researchers merely reported the quantity of postoperative morbidities. Without providing the data regarding to severity of complications, it is hard to figure out whether the intracorporeal esophagojejunostomy truly improving the surgical outcomes. The comprehensive complication index or the Clavien–Dindo classification are recommended to evaluate the severity of postoperative complications.

Thirdly, concerns on the learning curve should be noted as well. TLTG is considered as a more technical-demanding procedure and sufficient practices are still required to overcome the learning curve although surgeons usually shift to TLTG since they have been experienced in LATG. The meta-analysis is based on several studies with less than 100 cases, inferring the initial experience of TLTG, causing 100 cases volume was reported as a threshold of the learning curve [4]. Optimistically, TLTG might be a promising procedure as it retrieved slight better outcomes than LATG even in initial experience hands. However, it doesn't mean it's time to encourage surgeons to perform TLTG instead of LATG in small-volume centers. A consensus on the training protocol of TLTG is awaited before generalizing this technique.

In conclusion, we believe that the meta-analysis is encouraging and further studies evaluating the advantages of TLTG with different intracorporeal esophagojejunostomy methods are required.

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