Commentary: Navigating the perils of neoadjuvant chemoradiation for esophageal surgeons

Anna L. McGuire, MD, MSc, FRCSC, and John Yee, MD

From the Division of Thoracic Surgery, Department of Surgery, Vancouver General Hospital, University of British Columbia; and Vancouver Coastal Health Research Institute, Vancouver General Hospital, Vancouver, British Columbia, Canada.

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Address for reprints: Anna L. McGuire, MD, MSc, FRCSC, Division of Thoracic Surgery, Department of Surgery, Vancouver General Hospital, Vancouver Coastal Health 2775 Laurel St, Suite 7113, V5Z 1M9, Vancouver, BC, Canada (E-mail: anna.mcguire@vch.ca).

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Anna L. McGuire MD, MSc, FRCSC; John Yee, MD, FRCSC, FACS

Central Message

The impact of omentoplasty on intrathoracic esophagogastric anastomosis after chemoradiation has yet to be prospectively assessed.

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Anastomotic leak remains the most feared complication for esophageal surgeons despite significant technical advances in minimally invasive esophagectomy (MIE). This risk is especially significant following neoadjuvant chemoradiotherapy for esophageal carcinoma.¹⁻⁴ With an overall risk of anastomotic dehiscence risk of approximately 11%, the associated morbidity of intrathoracic leak is significantly greater than cervical due to local effects of mediastinal and pulmonary sepsis.⁵ The well-known ensuing downstream effects of any clinically significant leak on postoperative morbidity include not only increases in length of hospital stay but also increased rates of reoperation, readmission, and 30-day mortality.⁶ As such, for esophageal surgeons, harnessing any technical advantage within our control in an effort to decrease anastomotic-associated morbidity for patients is warranted. Herein lies the value of the current study by Lu and colleagues.⁷

The paper from Lu and colleagues is highly relevant in its examination of the impact of omentoplasty on anatomic adverse events in a previously excluded yet truly relevant study population: neoadjuvant chemoradiation patients undergoing Ivor Lewis MIE for carcinoma. This is an important study population because, despite the technically demanding learning curve, Ivor Lewis MIE is increasingly being adopted in clinical practice.⁸ In addition, a vast proportion of our patients with esophageal cancer undergo induction chemoradiotherapy before resection due to their locally advanced stage at presentation.⁹ To date, 3 randomized controlled trials have been published comparing the impact of omentoplasty on esophagogastric anastomotic leaks.¹⁰⁻¹² They subsequently underwent pooled analysis of estimates.¹³ All 4 studies revealed a protective impact of omentoplasty, finding decreased risk of leak in patients randomized to anastomotic omentoplasty. All 3 of these prospective trials excluded postradiation patients, making the contradictory findings of Lu and

colleagues in this population raise interesting questions regarding the relative contributions of omentoplasty versus dose of gastric fundic radiation in clinical occurrence of leak.³ The impact of omentoplasty after neoadjuvant chemoradiation has yet to be established in a prospective trial.

Despite filling the unmet need of opening discussion on omentoplasty in the neoadjuvant chemoradiotherapy population, potential sources of study bias relate to the retrospective nature. The primary study weakness is beyond the control of the authors, being a sample size of convenience, with implications for power of study findings and precision of reported estimates. They have identified and thoughtfully discussed methods to address inherent bias in the dataset with propensity weighting. In addition, their analysis provides exploratory value informing the need for a prospective study on the esophageal resection population undergoing induction chemoradiotherapy.

The great value of this paper is that it illustrates the need for an ongoing thoracic surgical culture of mindfulness and reflection regarding optimization of the esophageal anastomotic technique. This discussion is accessible and relevant to all thoracic surgeons. Are we truly maximizing use of all surgical techniques within our control for patient populations in need? In the case of postoperative anastomotic outcomes for patients with esophageal cancer undergoing neoadjuvant chemoradiation, we will do well to focus further attention.

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