To sew or to staple?

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Oesophageal resection with or without preoperative therapy remains the mainstay of the treatment of oesophageal cancer. Advances in the surgical technique and perioperative care have improved short-term outcomes considerably by decreasing operative mortality. Despite these advances, oesophagectomy remains a procedure associated with considerable morbidity from a wide range of complications [1]. Centralization of expertise and standardization of care in specialist centres of excellence with a high procedural volume has reduced the mortality rate of an oesophageal resection from as much as 20% twenty years ago to around and often <5% [2].

While death following oesophageal resection can have many causes, the major one of concern to any team results from a loss of anastomotic integrity, which can occur early, possibly as a result of technical failure at the time of surgery, or more commonly as a failure of healing, with signs often being subtle in the early stages and causing difficulty for the surgical team. The risk factors for anastomotic leakage after oesophageal surgery are well documented [3]. They include local factors relating to the surgical technique, systemic factors such as malnutrition, blood loss and care after surgery [4], and conduit factors such as choice and position of conduit or surgical approach.

In this issue, Liu et al. [5] have sought to clarify one aspect of oesophageal resection surgery by carrying out a prospective, single group, randomized controlled trial comparing the hand-sewn anastomotic technique with a mechanical oesophagogastric anastomosis in order to determine which, in a standard set of circumstances, is likely to produce less anastomotic leaks. Having treated a large number of surgical candidates in a relatively short time interval, they have sufficient numbers to take account of both individual patient variation and tumour characteristics and possible subtleties in operative and postoperative care. They anticipated the possible differences between the two techniques and calculated numbers in order to provide statistical power to the study. Although previous retrospective analyses have found that stapled anastomoses reduced bleeding and operative time, the use of the stapler resulted in a higher incidence of anastomotic stricture and pulmonary complications and mortality. There appeared to be no significant difference in anastomotic leak rates [6]. However, the analysis included 13 different studies and different operative and management protocols.

The authors’ results demonstrate firmly an increased operating time for hand anastomosis, a decreased clinical and radiological leakage rate for mechanical oesophagogastric anastomosis but an increased risk of anastomotic stricture using the circular stapler. This latter is amply explained in the text. This study would appear to settle the matter. While I am sure surgeons will continue to have operative preferences, they should heed these results and consider adjusting their practice accordingly. It should be remembered, however, that there may be circumstances where a stapler cannot be used, and a hand anastomosis becomes essential. One hopes surgeons will not have forgotten the necessary skills.

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REFERENCES