Letter to the Editor

To sponge or not to sponge: that is the leak question

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Anastomotic leak (AL) following oesophagectomy occurs in 14.2% of patients (1), and is associated with prolonged hospital stays, increased use of resources, and a 30-day mortality rate as high as 35% (2), compared with an international benchmark of 3.2% (1). Patients with severe leaks historically require operative management which may include disconnection of the anastomosis, formation of an oesophagestomy, a phase of protracted nutritional support, and planned reconstructive surgery at a future date. However, smaller leaks, often managed by conservative therapy, may have little impact on length of stay or post-operative recovery. Nevertheless, leaks are simply reported in national or international audits as a binary measure. This is an important factor in the argument, when is a leak a leak. The AL severity reporting guidelines published by Low and colleagues also includes a subdivision of conduit necrosis within the realm of anastomotic/conduit 'complications' (3). This raises the possibility that 'radiological' leaks may be discounted and ALs with conduit necrosis may be characterised as grade III conduit necrosis; neither identified as leaks and therefore reducing the perceived leak rate of a unit. Importantly, both are a deviation from the textbook outcome and require transparent reporting, yet no measures are in place that will identify AL occurrences with the greatest sensitivity. Aside to this argument, what matters most, is not whether a leak has occurred but has the patient had an adverse peri-operative outcome; and this remains unclear and possibly under-reported. Lewis Cass [1782–1866], an American military officer, politician, and statesman, is believed to have once famously said, "*People may doubt what you say, but they will believe what you do*". This resonates in post-operative care and AL definitions. When is a leak a leak? When it is managed as a leak.

The post-operative sequalae of events associated with a post-oesophagectomy AL have a significant negative impact on a patients' quality of life as well as increased economic costs for care providers. The median cost of oesophagectomy with a severe complication is reported to be in the order of €59,167 compared with €23,476 in those without complications (4). Therefore, any efforts to reduce the physiological impact of the complication on the patient is pivotal to service improvement. Endoluminal vacuum therapy (EVT), inserted via endoscopy, offers a less invasive approach to managing ALs. A case series of 119 patients by Jung and colleagues [2022] from South Korea, revealed that Eso-sponge successfully treated 60/90 (67%) patients with a mean oesophageal fistula size of 1 cm (5). Total duration of Eso-sponge therapy was in the order of 20 days with changes occurring every 6 days. Further, a case series by Min and colleagues [2019], from South Korea, demonstrated that the median number of sponge exchanges in a cohort with a mean fistula size of 1.75 cm was 5 with a median length of treatment and total hospital stay of 15 and 49 days, respectively (6). These series both included patients with a modest size defect and highlights the challenges of incorporating Eso-sponge therapy into routine practice; what is the optimum selection criteria for Eso-sponge therapy? One particular challenge relates to defining what constitutes a minor, moderate, or severe leak. Although several scoring systems have been proposed (7), the scoring system proposed by Low and colleagues (3), based on how the leak was managed is one of the most commonly used.

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Reporting bias is an inherent limitation of this approach of severity characterisation as larger defects managed by Eso-sponge are still considered Grade 2. A reasonable approach given that patients with a defect of 3cm can be successfully managed with EVT (6).

The role of Eso-sponge is evolving. It appears to be used within cavities for an AL and perforations (8), within the lumen of small defects and emerging data suggests a potential use prophylactically at the time of original surgery in cases where there are anastomosis concerns (9). The use of EVT is therefore becoming more common without a clear defined framework for use. Therefore, Eso-sponge use should be reported like other Key Performance Indicators (KPI) for quality of surgery including national data outcomes and all trials comparing techniques. Patients receiving EVT for AL often require multiple returns to theatre, which is costly and as yet, the impact of EVT on patient quality of life, length of hospital stay, and rates of interventional radiology procedures, when compared with other management options all remain unknown. If EVT was to be reported as a KPI, it should be considered a credit to centres who do use Eso-sponge, as it reflects teamwork, resilience in a service and available resources. These are important features of a successful high-volume centres. One must note that small units without a dedicated oesophagogastric (OG) oncall service may have a lower incidence of its use not because of better surgery but the inabilities to offer such interventions proactively in their patients; an important reflection if EVT is to be reported like other KPIs. Nevertheless, the use of an Eso-sponge is a deviation from a textbook outcome and favours itself as a KPI in patients undergoing oesophagectomy, possibly more so than reporting AL as a single binary end-point. We therefore call for measures to be put in place for Eso-sponge use to be a KPI in nationally and internationally collected audit data.

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Footnote

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