

## ESOPHAGEAL LEAK AND RUPTURE



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### ESOPHAGEAL LEAK

Standard procedure for treatment of esophageal carcinoma is resection. The most important complication following esophageal resection is esophagogastric anastomotic leak. The incidence of anastomotic leak is 10-25% at the cervical region, but mortality rate in this region is low [1,2]. In the literature, the incidence of thoracic anastomotic leaks is 3-25% and the mortality rate is 30-60% [3]. Approximately 40% of general postoperative mortality rate is related to esophagogastric anastomotic leaks [4]. The most effective treatment option for esophagogastric anastomotic leaks is controversial and there is not any standardized treatment algorithm. While some surgeons recommend aggressive surgery, others prefer conservative approaches including perianastomotic drainage, total parenteral nutrition, nasogastric decompression and the use of antibiotics with wide spectrum. Recently, the use of self expandable coated metallic stents resulted in considerable improvement of thoracic anastomotic leaks.

Postesophagogastric anastomotic leak may be defined clinically and radiologically as opening of the esophagogastric anastomosis. The most useful and applicable definition of anastomotic leaks was made by Lerut et al. in Surgery Infection Study Group [5-7] [Table 1].

**Table 1. Definition of anastomotic leaks recommended by Lerut et al.**

| Leak [Grade]          | Definition  |
|-----------------------|---|
| Radiological [I]      | No clinical feature   |
| Minor Clinical [II]   | Local inflammation [cervical wound]<br>X-ray suppressed leak [thoracic anastomosis] |
| Major Clinical [III]  | Severe disruption sepsis  |
| Conduit necrosis [IV] | Endoscopic confirmation   |

The etiology of anastomotic leaks is multifactorial and the etiologic factors can be classified in four groups [Table 2]. Multiple systemic factors affect wound healing and thus, anastomotic leaks. Preoperative malnutrition is a well-known risk factor for the development of anastomotic leak and usually determined by a weight loss of more than 10% and by the preoperative serum albumin levels. Diabetes Mellitus is related to a negative effect on wound healing, prolonged hospitalization period, decreased survival and postoperative complications. Hypotension and hypoxemia may lead to a decrease in perfusion and oxygenation of the anastomosis. Thus, it is important to avoid hypotension. In animal models, it was shown that chemotherapeutic agents had negative effects on the healing of esophagogastric anastomosis. The most controversial literature includes the result of

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formed as primary repair or thoracoscopic drainage performed with endoscopic stent placement.

## CONCLUSION

It is seen that minimally invasive methods accelerates the recovery of the patients, decreases the period of hospitalization, patient morbidity and the costs. More accurate diagnosis and less invasive treatment reduce the morbidity and mortality to more acceptable levels. Endoscopic treatment should be considered for stable patients with smaller perforations which are contained or well drained. Even long-term esophageal fistulas resulting from perforation can be closed with endoscopic treatment. In cases with excessive contamination and large uncontained perforation, surgical treatment can be combined with endoscopic procedures. As endoscopic and radiologic therapeutic techniques are being developed day by day, hybrid procedures combining treatment methods will be more common. These minimally invasive methods can be easily applied in experienced thoracic surgery clinics, and in a near future, a consensus on the treatment of esophagus perforation can be made.

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