

Thoracic Surgery Second Opinions™ Consultation

Date:

Patient:

Discussion:

The patient underwent robotic Ivor-Lewis esophago-gastrectomy on December 1, 2023 for distal esophageal and GE junction adenocarcinoma and was admitted to ICU postoperatively. She developed a pleural effusion and some degree of respiratory failure on December 3, 2023 requiring placement of a pleural drain on that date and subsequently endotracheal intubation on December 4, 2023. An anastomotic leak was identified by barium swallow on December 5, 2023. This required initial operative repair on that date. The leak was complicated by mediastinitis due to mediastinal soiling from the leak and sepsis requiring treatment with broad spectrum IV anti-microbial agents. A percutaneous jejunostomy tube was placed on December 8, 2023 for nutritional support as the patient was unable to be fed orally due to the leak. The respiratory failure was prolonged and the patient required tracheostomy placement on December 13, 2023. The patient was started on slow weaning from the ventilator with T piece trials on December 19, 2023. Esophageal stenting to help further control the leak was done on December 21, 2023 with subsequent stent changing on December 25, 2023 and again on January 5, 2024. The patient had been weaned off of the ventilator by January 1, 2024. However, on January 5, 2024, the patient developed rather sudden mental status and neurologic changes and was found to have a parietal-occipital intracranial cortical bleed on brain CT scan. This was complicated by seizures requiring treatment with Keppra and recurrent respiratory failure, again requiring mechanical ventilation. She slowly improved after this and by January 25, 2024 was awake, not requiring mechanical ventilation and able to follow commands and cleared for oral intake of water. However, she remains quite debilitated and is essentially bed bound secondary to postoperative complications, but is felt to show potential for functional recovery. She will require ongoing intensive rehabilitation with skilled nursing, physical therapy and occupational therapy.

Recommendations:

Continue maximal rehabilitation as tolerated with skilled nursing, physical therapy and occupational therapy. Advance oral nutritional intake as tolerated and as felt to be safe and clinically appropriate per the surgeon. If any anytime during the advancement of oral intake the patient develops swallowing difficulties or any episodes of aspiration, consult speech pathology for swallowing evaluation. Continue jejunostomy tube feedings until such time as patient is able to take full caloric needs orally.

Answers to patient's questions:

1. Reason for mediastinal leak at the site of anastomosis - This is a known and relatively frequent complication of Ivor Lewis esophago-gastrectomy and is known to occur in 7-22% of cases (Reference 1) and can easily lead to mediastinitis and sepsis due to the mediastinal soiling from the leak. In one large series of

over 1500 patients, anastomotic leak occurred in 19% of these cases (Reference 2). A leak often requires initial surgical treatment (as was done in this case) and can often be sealed with esophageal stenting (as was done in this case). This stenting approach was successful in 70% of cases in one series over a median of 28 days (Reference 3).

2. Reason for parietal-occipital bleeding - This is most likely related to the sepsis that complicated the anastomotic leak. Sepsis is known to increase the risk of both ischemic and hemorrhagic stroke. (Reference 4).

3. Review and share opinion for probable iatrogenic or any possibility for medical negligence - Based on my review of the records provided to me, I find no evidence of medical negligence or deviation from the standard of care. The complications that occurred are well known potential complications of this procedure. It appears that they were recognized promptly and treated appropriately. I recognize the fact that these were quite debilitating and life-threatening for the patient and likely very traumatic for the patient's family, but I see no evidence of medical negligence. I did not receive a detailed operative report for the robotic Ivor Lewis esophago-gastrectomy, so I am unable to comment on the intra-operative technical details of the procedure. However, these are high-risk, extensive and lengthy procedures that generally take 6-9 hours to complete, depending on a variety of factors. I can attest to this from extensive personal experience doing Ivor Lewis procedures over many years.

References:

Reference 1 - Ha JS, Battafarano RJ. Complications of Esophageal Resection. Pearson's General Thoracic Surgery STS e-book. April 12, 2022.

Reference 2 - Fabbi M, et. al. Anastomotic leakage after esophagectomy for esophageal cancer: definitions, diagnostics and treatment. Dis Esophagus. 2021 Jan 11;34(1).

Reference 3 - Plum PS, et. al, Outcome for Self-Expanding Metal Stents in the Treatment of Anastomotic Leaks After Ivor Lewis Esophagectomy. World J surg. 2019 Mar.

Reference 4 - Shao IY, et. al. Risk Factors for Stroke in Patients with Sepsis and Bloodstream Infections. Stroke. 2019;50:1046-1051.

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