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**Conclusion:** This case presents an uncommon diffuse multisite stress reaction within a pediatric patient. Early identification of stress reactions can help prevent stress fractures and their subsequent complications. Management includes a reduction of weight-bearing status with gradual return to activity and modification of biologic and biomechanical risk factors that predispose to bone stress injuries.

https://doi.org/10.32873/unmc.dc.gmerj.4.1.031

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**A Case Report of Non-surgical Esophagocutaneous Fistula Closure: Even a Blind Squirrel Finds a Nut**

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**Program:** General Surgery

**Type:** Case Report

**Background:** Chronic esophagocutaneous fistulae are infrequent pathologic entity in adults. Their management is challenging and ranges from conservative to the more invasive approaches. Here we describe a chronic, recalcitrant esophagocutaneous fistula that was closed using an antibiotic-soaked bio-absorbable mesh.

**Case:** The patient is a 67-year-old female with a history of “esophageal surgery” as an infant and subsequently developed chronic esophageal stricture requiring serial dilatations throughout her adulthood. During a routine esophageal dilatation, she sustained an esophageal perforation. The patient underwent several operative procedures at an outside facility including a right thoracotomy, a pericardial patch, an intercostal muscle flap, several chemical pleurodeses, and gastrostomy and jejunostomy tube placements. A postoperative esophagram was negative for a leak, so the patient was discharged to rehabilitation facility on enteral feeds. Unfortunately, the patient developed purulent drainage from her thoracotomy wound, and she was transferred to our hospital for further treatment. An esophagram and CT chest with oral contrast demonstrated an esophageal stricture with contrast extravasation from the esophagus into the right thoracic cavity with communication to the right thoracotomy (Fig 1 upper left and right images). The patient declined an esophageal diversion and esophagectomy. Therefore, we attempted several less invasive measures to close the fistula, including keeping the patient NPO, covering the fistula with an esophageal stent, filling the thoracic space with muscle flaps, attempting closure with an endo VAC and T tube placement. While the muscle flaps helped decrease the space within the thoracic cavity, the fistula never closed. Having exhausted traditional methods, we placed doxycycline-soaked bio-absorbable mesh (Strattice) across the fistula like a plug, occluding the tract (Fig 1, lower right). The patient was kept NPO, the gastrostomy tube was placed to gravity, and enteral feeds were instilled through the jejunostomy tube. Six weeks later, flexible esophagoscopy revealed complete resolution of the fistula (Fig 1, lower right). An esophagram confirmed these findings (Fig 1, lower left). Oral intake was permitted, and once the patient demonstrated sufficient intake and weight gain, the jejunostomy and gastrostomy tubes were removed. Patient consent was obtained to utilize this case for educational purposes.

**Conclusion:** The method described permitted closure of a chronic esophageal fistula after traditional non-operative methods had failed. Although rare, there have been reports of esophagocutaneous or other foregut fistulae closure with bioabsorbable mesh following failure of traditional therapy. Our method required endoscopic placement of the mesh across the fistula in addition to nil per os, distal enteral nutrition and gastric decompression. This case demonstrates a non-surgical alternative for upper gastrointestinal tract fistulae.

https://doi.org/10.32873/unmc.dc.gmerj.4.1.032

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**Figure 1.** The upper left images demonstrate esophagocutaneous fistula with contrast communicating with the thoracotomy incision. The upper right images demonstrate oral contrast extravasation into the right hemithorax and into the right thoracotomy incision. The lower right image is an endoscopic view of bio-absorbable mesh plug within the fistula tract. Lower left images demonstrate endoscopic closure of fistula and esophagram without contrast extravasation.