

EP-035

식도암 수술로 인한 기관식도루 발생 후  
후방 늑간동맥 천공지 피판을 이용한  
기관 결손 재건: 증례 보고

(Tracheal Defect Coverage with Posterior Intercostal Artery Perforator Flap Following Esophageal Cancer Surgery-Induced Tracheoesophageal Fistula: A Case Report)



가톨릭대학교 은평성모병원  
서해진, 김지윤\*

**Purpose:** Esophageal cancer surgery complications, particularly anastomotic leakage, can lead to catastrophic outcomes. A subsequent tracheoesophageal fistula may rapidly progress to respiratory failure, making prompt and effective coverage crucial. We report a case of tracheal defect coverage using a pedicled posterior intercostal artery perforator (PICAP) flap.

**Methods:** An 80-year-old male underwent esophageal cancer surgery by general surgery and showed no complications until postoperative day (POD) 14. However, he suddenly developed respiratory failure with decreased oxygen saturation, requiring intubation. Bronchoscopy revealed a 3x1 cm tracheal defect. Initial coverage with acellular dermal matrix (ADM) failed, prompting cooperation with plastic surgery to utilize a pedicled PICAP flap. Under general anesthesia, with the patient in the lateral position, an 8x3 cm PICAP flap was designed at the 5th intercostal space. Flap elevation began distally, carefully preserving the cranial pedicle and sparing the serratus muscle until reaching the latissimus dorsi muscle area. After flap elevation, the surgical team switched to one-lung ventilation, performed rib resection, and entered through the parietal pleura to access the tracheal defect. The flap was inset, and the procedure concluded.

**Results:** The patient was extubated seven days postoperatively but subsequently developed

respiratory failure again, ultimately resulting in death.

**Conclusion:** Tracheal defect coverage remains highly challenging; however, the pedicled intercostal muscle flap may serve as a valuable additional option.

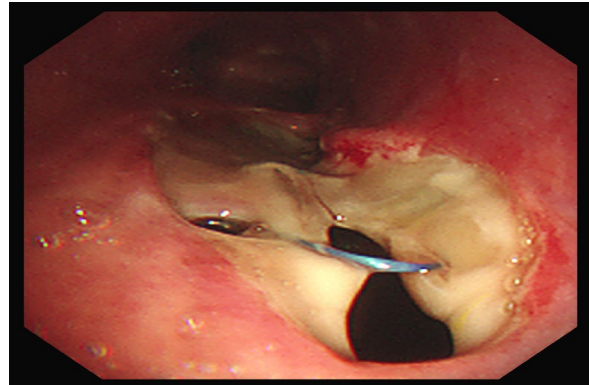


Fig. 1. A 3x1cm tracheal defect observed preoperatively via bronchoscopy



Figure 2. Pedicled posterior intercostal artery perforator flap after elevation.



Fig. 3. Insetting of the pedicled posterior intercostal artery perforator flap into the thoracic cavity toward the tracheal defect.