

## Influence of esophagectomy on the gastroesophageal reflux in patients with esophageal cancer

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**Background/Aims:** The present study aimed to assess the influence of esophagectomy with gastric transposition on the gastroesophageal reflux (GER) and gastric acidity in patients with esophageal cancer. **Methods:** Fifty-three esophageal cancer patients who underwent 24-hour impedance-pH monitoring after esophagectomy were retrospectively analyzed. We used a solid state esophageal pH probe in which esophageal pH sensor was placed 1.5 cm distal to the upper esophageal sphincter and gastric pH sensor is located 15 cm distal to esophageal pH channel. 24-hour impedance-pH monitoring data and other clinical data including anastomosis site stricture and pneumonia were collected. We defined pathologic reflux with reference to known normative data. Stricture was defined when intervention such as bougienage or balloon dilatation was required to relief dysphagia. **Results:** Esophageal and gastric mean pH was  $5.47 \pm 1.51$  and  $3.33 \pm 1.64$ , respectively. Percent time of acidic pH ( $< 4$ ) was  $6.66 \pm 12.49\%$  in the esophagus and  $70.53 \pm 32.19\%$  in the stomach. Esophageal pathologic acid reflux was noticed in 32.1%, 20.8%, and 35.8% during total, upright, and recumbent time, respectively. Esophageal pathologic bolus reflux was noticed in 83.0%, 77.4%, and 64.2% during total, upright, and recumbent time, respectively. Gastric acidity increased with time after esophagectomy. Esophageal acid exposure time correlated with intragastric pH. However, esophageal pathologic acid reflux was not associated with anastomosis site stricture and pneumonia. **Conclusions:** GER frequently occurs after esophagectomy. Strict life-style modification and acid suppression seems necessary to manage GER in patients underwent esophagectomy.

## Long-term outcome and safety of endoscopic submucosal dissection for esophageal cancer

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**AIM:** Endoscopic resection is an effective and minimally invasive treatment for superficial esophageal cancer without distant metastasis. We investigated the clinical outcome of endoscopic submucosal dissection (ESD) for superficial esophageal squamous cell carcinoma (SESICC). **Methods:** We retrospectively analyzed SESICC patients who underwent ESD between Mar 2007 and Feb 2016. En bloc resection, complete resection, and curative resection were evaluated. Recurrence and mortality during follow-up were investigated. Procedure-related complications were also assessed. **Results:** A total of 161 cases were treated with ESD in 157 patients for SESICC. The patients' median age was  $64.36 \pm 7.63$  years, and 145 males (92.4%) were included. The median tumor size was  $1.45 \pm 0.79$  cm. En bloc resection was achieved in 150 (93.2%) lesions. Complete resection was attained in 122 (75.8%) lesions, and curative resection was achieved in 93 (57.8%) lesions. Procedure-related complications included micro- and frank perforation ( $n = 10$  and  $n = 4$ , respectively total = 14, 8.9%) and stricture ( $n = 18, 11.2\%$ ). In perforated cases, 2 patients underwent operation and the others were treated with endoscopic hemoclipping and conservative management. In patients with stricture, 14 (8.7%) patients underwent balloon dilatation, 2 (1.2%) patients underwent stent insertion, and 2 (2%) patients had no treatment. However, procedure-related mortality did not occur. Among patients who achieved curative resection ( $n = 89$ ), tumor recurrence occurred in 5 (5.3%) patients during follow-up. In recurrent cases, 2 patients underwent ESD, 2 patients received APC, and 1 patient underwent CCRT. In our study, general anesthesia group had better outcome than conscious sedation group in mean procedure time and duration of hospital stay. **Conclusions:** Our study showed favorable clinical outcome in SESICC patients when they were treated with ESD, and revealed that esophageal ESD is a relatively safe, technically feasible, and effective treatment, and when curative resection was achieved, it showed favorable long term outcome. Additionally, esophageal ESD under general anesthesia provided a safe treatment environment and was very effective for wide lesion requiring longer procedure time.