Intratracheal long-term pH monitoring: a new method to evaluate episodes of silent acid aspiration in patients after esophagectomy and gastric pull up.

Abstract:
Aspiration of gastric contents is considered a leading cause of postoperative pulmonary complications after esophagectomy and gastric pull up but has been difficult to diagnose. We used intratracheal long-term pH monitoring to evaluate the prevalence of aspiration of gastric contents in patients undergoing these operations. Continuous intratracheal pH monitoring was carried out during the first 72 postoperative hours in 16 patients with esophageal carcinoma who had undergone esophagectomy and gastric pull up. A drop in the pH to less than 4 was defined as an episode of acid aspiration. All patients except one tolerated the probe without any difficulties. Episodes of acid aspiration could be detected in 12 (80%) of 15 patients (5 of 8 after transhiatal esophagectomy, 7 of 7 after transthoracic esophagectomy, 2 of 5 with reconstruction in the anterior mediastinum, and 9 of 10 with reconstruction in the posterior mediastinum). The number of aspiration episodes was significantly higher during postoperative day 1 (P=0.03) compared to postoperative days 2 and 3. Two patients developed pneumonia later in the postoperative course. Both of them had several episodes of acid aspiration detected by pH monitoring immediately postoperatively. Intratracheal pH monitoring is a safe, feasible, and well-tolerated method for detecting episodes of acid aspiration after...
esophagectomy and gastric pull up. Aspiration of gastric contents is a common phenomenon particularly during the first 24 postoperative hours after transthoracic esophagectomy and gastric pull up in the posterior mediastinum and appears to correlate with the development of postoperative pneumonia.