Per Oral Cricopharyngotomy for Cricopharyngeal Bar: Emphasis on Technical Limitations

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Introduction

Endoscopic cricopharyngotomy (c-POEM) is a treatment for cricopharyngeal dysfunction, specifically cricopharyngeal bars (CPB). Techniques for c-POEM differ from other endoscopic surgical procedures such as peroral endoscopic myotomy (POEM), gastric peroral endoscopic myotomy (g-POEM), and zenker peroral endoscopic myotomy (z-POEM). We report three patients who underwent c-POEM for cricopharyngeal bar (CPB), their clinical course, and outcomes.

Methods

Single institution retrospective chart review of three patients who underwent c-POEM and their immediate post-operative course. These three patients represent all patients who underwent c-POEM. The operating surgeons are experienced endoscopists who regularly perform endoscopic myotomy.

Results

The three patients were female, over 50 years old, and presented with dysphagia secondary to cricopharyngeal bar. All three patients had perioperative complications consistent with esophageal leak requiring prolonged hospital courses and recovery. All three patients had improved but had persistent dysphagia up to 9 months following the procedure.

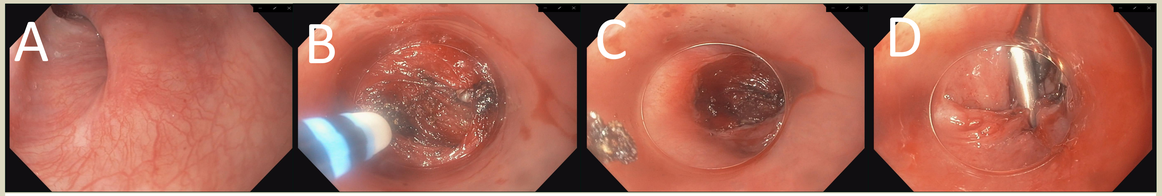


Image 1. Case 1 – Endoscopic images showcasing (A) Pre-operative cricopharyngeal bar (B) Initial cut to expose the bar (C) Exposure of the excisional tube (D) Post-operative results w/ clip

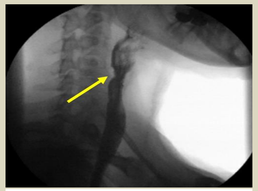


Image 2. Case 1 - Barium swallow study showing the presence of a cricopharyngeal bar

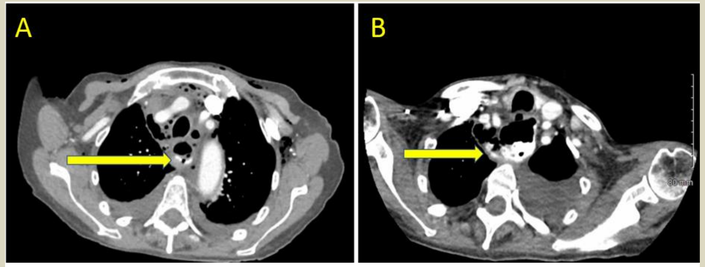


Image 3. Case 1 - CT scans showcasing esophageal leak with a pleural effusion on (A) POD 3 and (B) POD 5

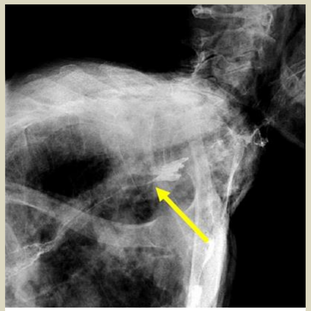


Image 4. Case 2 - Barium swallow study showing the presence of a cricopharyngeal bar

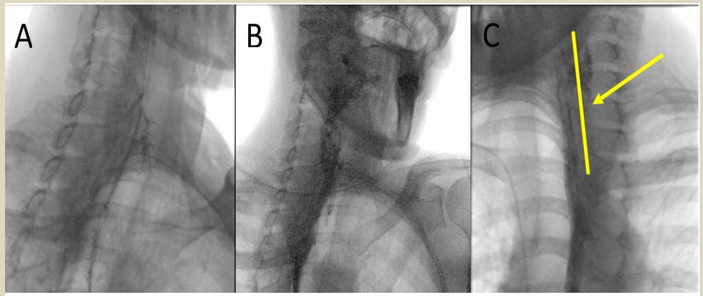


Image 5. Case 2 - UGI series showcasing esophageal leak on (A) POD 6 (B) POD 8 (C) POD 9

Case #	Post-Operative Complications
Case 1	On POD 2 the patient desaturated, and a CT scan noted an esophageal leak. Upper endoscopy revealed a small non-healing mucosotomy. Post drainage, the patient had a prolonged hospital course. She was discharged on POD 18 with drain removal on POD 29.
Case 2	On POD 2 the patient was found to have an esophageal leak on contrast esophagography. The decision was made to forgo additional endoscopic closure methods and a nasogastric tube (NGT) was placed for drainage. The patient had a prolonged course of conservative management and was discharged home on POD 13.
Case 3	The patient developed an esophageal leak, which was managed conservatively with eventual healing of the leak. The patient, however, had persistent dysphagia.

Table 1. Post-operative complication summaries of 3 patients who underwent c-POEM

Conclusions

The results of this small case series exemplify the high rate of complications, specifically post-operative esophageal leak, when performing c-POEM for cricopharyngeal bar. Thus, we stress caution and recommend against performing c-POEM for CPB.