Introduction

Hypopharyngeal and esophageal perforations are well-recognized complications of anterior cervical spinal surgery. Reports focused on this as a rare complication within the early postoperative period, however, with increasing of this technique more delayed perforations were noted. Early perforations usually detected by the operating surgeon due to increased pain, dysphagia, crepitations, fever, tachycardia and leukocytosis and are typically caused by aggressive instrumentation during surgery. Late perforations often less obvious and after thought to be usually secondary to hardware extrusion or failure. However, delayed perforations can be seen in the absence of obvious hardware failure. Chronic pressure necrosis is through to be the underlying cause.

The symptoms of late esophageal perforations can be vague and often the index of suspicion is low. We have noted that early transnasal esophagoscopy performed in clinic is a good screening test to identify patients with perforations resulting in exposed esophageal hardware, resulting in early repair preventing catastrophic complications and allowing for early return to function.

Methods

Five cases were reviewed utilizing existing surgeon’s logs.

The following data points were recorded:

- Patient age and gender
- Diagnostic techniques
- Preoperative and postoperative Functional Outcomes of Swallowing Scale (FOSS)
- Surgical repair
- Post-operative complications

Conclusion

A high degree of clinical suspicion for hypopharyngeal and esophageal perforation is required for patients presenting with dysphagia with cervical spine hardware. Particularly those with underlying cricopharyngeal spasm. Office esophagoscopy allows early diagnosis of perforations prior to development of significant life threatening complications. Early repair, removal of hardware, and coverage with a regional flap is optimal management of the perforation and for return of swallowing function.

Discussion

Although delayed esophageal perforations are not a common event following cervical spine surgery, they can have devastating complications if they are not managed promptly. Delayed presentation can be vague presenting with primarily dysphagia, lacking the signs of overlying skin erythema, tachycardia, subcutaneous emphysema and other signs associated with acute perforations. Severe dysphagia and aspiration pneumonia appear to be common findings in late perforation, but are no means specific. We feel that transnasal esophagoscopy represents a safe and effective method of screening for these patients, allowing for early diagnosis and treatment. In addition, it allows for diagnoses of alternative pathology resulting in their dysphagia. As previously reported, multi-disciplinary management in critical. Removal of hardware, closure of the esophageal perforation and placement of a regional flap is helpful in preventing further complications and leads to a return to oral feeding and cessation of aspiration.

Conclusion

A high degree of clinical suspicion is required for early diagnosis of delayed hypopharyngeal and esophageal perforation.

Use of office based esophagoscopy is a helpful screening tool in identifying patients with exposed hardware who present with dysphagia

Early management with removal of the hardware, closure of the perforation and coverage with a regional flap likely helps prevent further complications and return to a normal diet.

References