

An Unusual Iatrogenic Cause of Dysphagia

Case Report

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Abstract

A man in late sixties presented with difficulty swallowing on background of multiple spinal procedures. Barium swallow showed evidence of a loose screw from a previous anterior cervical discectomy with C5-C7 fusion resulting in luminal narrowing of the oesophagus and after exclusion of other abnormalities, was considered most likely cause of the patient's dysphagia. Here we present this case and review this rare complication of anterior cervical spinal surgery.

Keywords: Dysphagia; Oesophagus; C5-C7

Case Report

A man in late sixties presented with intermittent dysphagia to solids. The patient did not report any weight loss or fever. Physical examination of the cardiovascular, respiratory and gastrointestinal systems showed no abnormalities. Blood tests were normal. The patient has an extensive history of previous spinal procedures. The earliest of these procedures was an anterior cervical discectomy with C5-C7 fusion due to trauma performed 25 years ago. Other past medical history included type 2 diabetes and a recent diagnosis of a parotid pleomorphic adenoma. Barium swallow was performed to rule out any structural causes of dysphagia such as pharyngeal pouch or stricture. Barium swallow revealed that the left sided most inferior screw of the cervical spinal procedure was anteriorly displaced with movement upon swallowing (Figure 1, Video 1,2). The screw was indenting the oesophagus resulting in approximately 40% of luminal narrowing, persistently seen during entire bolus passage. Rest of the oesophagus was normal with normal swallowing mechanism and free flow of contrast from oesophagus to stomach. After clinical exclusion of other potential causes, this was thought to be the cause of the symptoms and it was decided that conservative management is the most suitable option for the patient given his extensive history and co-morbidities. Review of a previously performed MRI also showed the magnetic susceptibility artefact produced by the screw, indenting trachea and presence of a collapsed oesophagus in the vicinity. It is anticipated that the oesophagus remains undistended during bolus passage resulting in the narrowing seen on barium swallow and thereby the symptoms of dysphagia (Figure 2).

Loosening of screws following anterior cervical spine surgery is rare, but is associated with increased mortality due to the risk of oesophageal perforation [1]. Other rare complications of anterior

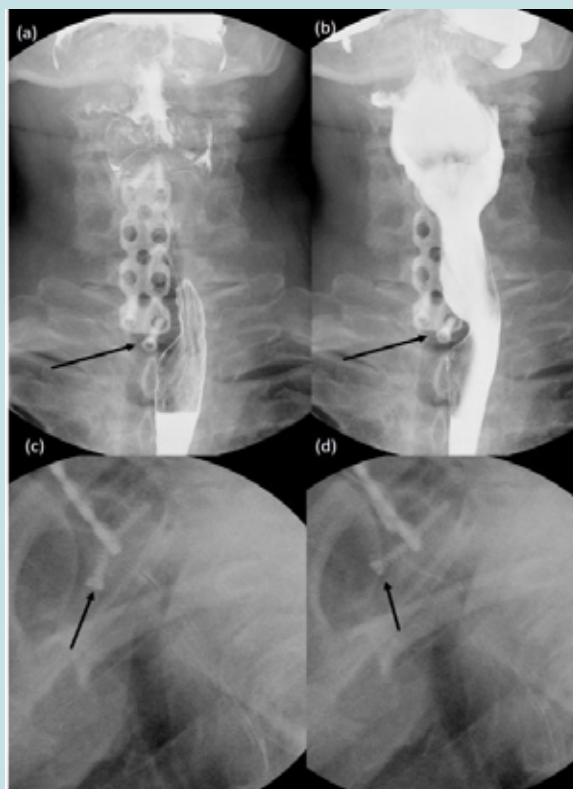


Figure 1: Barium Swallow images. Black arrow in frontal views (a and b) shows the screw indenting and narrowing the oesophagus in different phases of barium passage. Black arrows in lateral views (c and d) shows the screw is mobile in different phases.



Video 1: Barium swallow frontal projection. It shows mobile screw with indentation and focal narrowing of the oesophagus through the passage of barium.



Video 2: Barium Swallow lateral projection. It shows mobile screw during passage of barium through oesophagus.

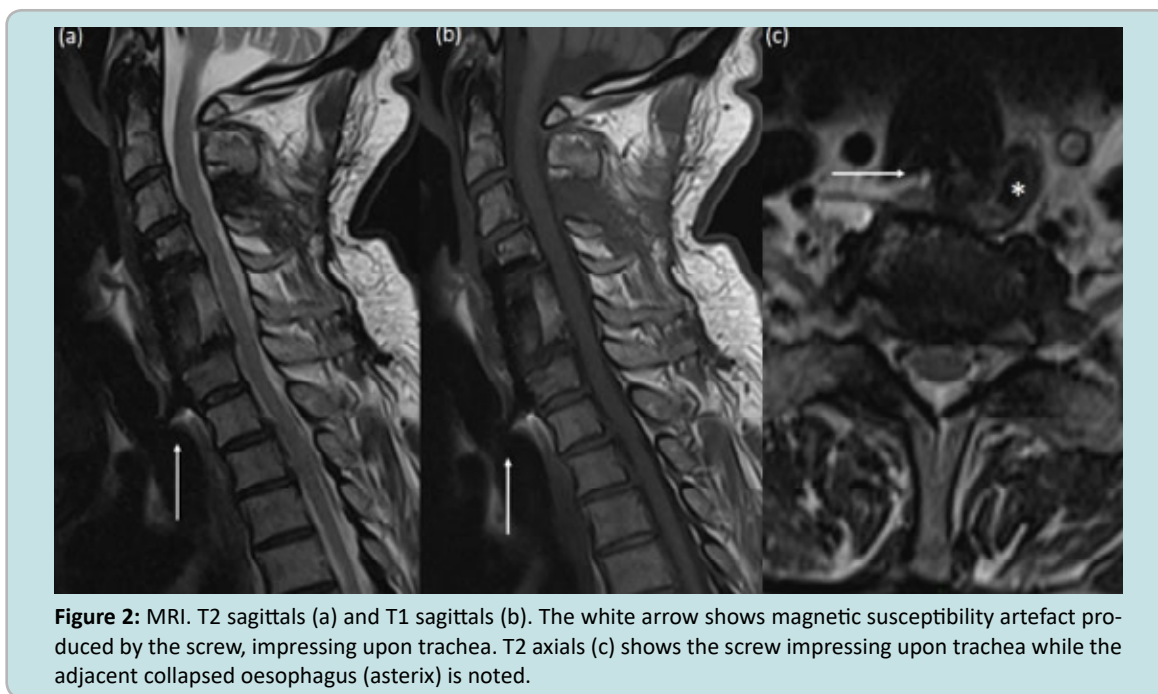


Figure 2: MRI. T2 sagittals (a) and T1 sagittals (b). The white arrow shows magnetic susceptibility artefact produced by the screw, impressing upon trachea. T2 axials (c) shows the screw impressing upon trachea while the adjacent collapsed oesophagus (asterix) is noted.

cervical spine surgery reported in the literature include fistulous communications and Horner's syndrome [2]. The latency period between the index surgery and occurrence of the complication can be up to 20+ years which is highlighted in our case report [3]. The dynamic nature of barium swallow in our case accurately and clearly demonstrated the complication, an advantage that is lacking in other non-dynamic modalities. Management of this complication can be tailored according to patient's clinical status with surgical management preferred to avoid risk of oesophageal perforation [1-3]. However, due to our patient's co-morbidities, conservative management was thought to be in the patient's best interest.

Conclusion

Loosening of screws following anterior cervical spinal surgery is a rare complication that can present with dysphagia many years following surgery. A dynamic study such as barium swallow is a useful tool to clearly demonstrate the loosening and can estimate the resulting luminal narrowing. Awareness and knowledge of this complication is important among the multidisciplinary team in order to direct the patient to the most suitable specialty and investigation.

Reference

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