



## Pharyngeal perforation due to cervical cage migration after cervical chordoma tumour growth

Raquel Gutierrez-Gonzalez MD PhD; Alvaro Perez-Zamarron MD; Marcelino Perez-Alvarez MD; Gregorio R. Boto MD, PhD

1Department of Neurosurgery. Fundación Jiménez Díaz-IIS FJD, Madrid. 2,3Department of Neurosurgery. La Paz University Hospital, Madrid.

4Department of Neurosurgery. Clinico San Carlos University Hospital, Madrid.



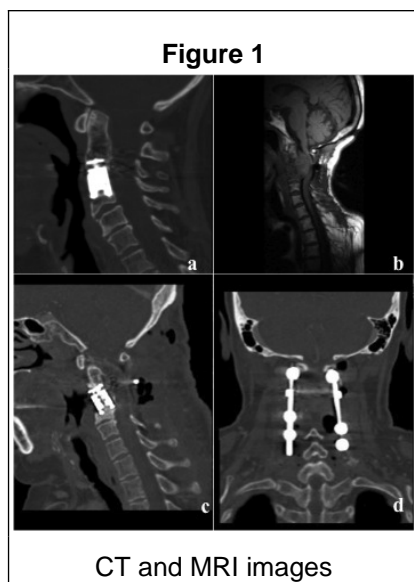
### Introduction

Screw migration after anterior cervical discectomy and fusion is rare and is usually related to device failure. It may provoke esophageal perforation and eventually the inadvertent expulsion of the screw through the gastrointestinal tract. As far as three cases of screw migration and hypopharynx perforation have been reported to date. We describe the first case of cervical interbody cage migration and oral expulsion.

### Methods

A 59-year-old Caucasian female was operated in 2005 of a cervical tumour invading the vertebral body of C3. She underwent an anterior transmandibular approach achieving tumour resection and anterior stabilization with an interbody expandable cylinder device (Figure 1a). Histological analysis evidenced a chordoma and the patient underwent subsequent intensity-modulated radiotherapy (50Gy). Six years later she presented with tetraparesis that was related with tumour relapse. Again, she underwent a left anterolateral submandibular approach. A minimal piece of tumour remained adhered to the vertebral artery. Neurological recovery was complete.

One year later, in 2012, she developed another tumour relapse that affected the vertebral bodies of C2 and C3 (Figure 1b). At this point a posterior approach was accomplished in order to resect the tumour and add spine stabilization C1-C6 (Figure 1c,1d). Following the operation the patient underwent adjuvant therapy with Cyberknife (30Gy).

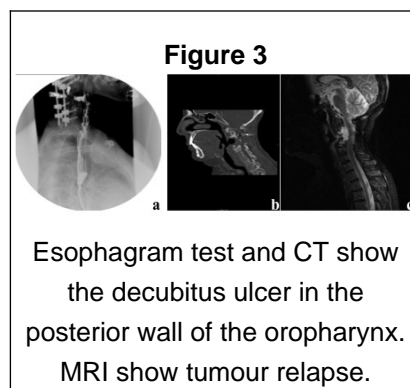


### Results

Once the treatment had finished the patient noted progressive halitosis and dysphagia. She was attended at our centre after sudden extrusion of the titanium cylinder implanted in the first surgical procedure when she suffered a cough access that resulted in the device expulsion through the oral cavity (Figure 2).



Fiber laryngoscope evaluation showed left hypopharynx widening and ipsilateral piriform recess collapse. Radiological studies showed a fistulous tract related to a decubitus ulcer in the posterior wall of the oropharynx as well as the extrusion of the interbody device in C3 (Figure 3). The patient recovered uneventfully after conservative management and endovenous antibiotics. She is actually waiting for a new surgical procedure due to tumour progression.



### Conclusions

Screw migration following anterior cervical discectomy and fusion is a very rare complication and is often related to device failure. It may provoke esophageal perforation and eventually the inadvertent and spontaneous expulsion of the screw through the hypopharynx, with only three cases published to date. In spite of the sometimes uneventful course of the complication, the importance lies on the risk of fistula and infection that usually entail slow recovery. We report the first case of cervical interbody device migration and extrusion through the oral cavity after hypopharynx perforation in a patient that had undergone cervical corpectomy due to a vertebral chordoma. Neurological deficit was avoided thanks to the presence of a posterior cervical fusion. Radiotherapy and progressive tumour growth may have favoured the development of a decubitus ulcer in the pharynx and the migration of the interbody device respectively.

### Learning Objectives

- 1) recognize complications after cervical fusion procedures
- 2) review chordoma behavior and prognosis
- 3) discuss prevention of this particular complication

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