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Case Report

The untold story of a coughed-out screw: a case report

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ABSTRACT

A 70 years old male, case of Cervical Spondylotic Myelopathy (C3-C4, C4-C5) with complaints of difficulty in walking and weakness of upper and lower limbs for 6 months presented to the outdoor department. Patient had restricted and painful movements of cervical spine. Patient was evaluated and then operated for anterior cervical discectomy and fusion with bone grafting at C3-C4, C4-C5. After first surgery the, Pre-op VAS Score improved from 8 to 2 and the Nurick Score improved from grade 4 pre op to grade 2 postop. Once the union of graft appeared adequate, we tried to convince the patient for early removal of prominent and prouting implant as the proximal screws were backing out but patient refused surgery. He finally presented with a coughed-out screw in his mouth in emergency. After removal of implant the surgical wound healed well and he did not complaint of any difficulty in deglutition. Loosening of implants after anterior cervical spine fusion surgeries adds to the morbidity to the procedure. Proper sized low-profile implants with good locking mechanism can reduce the complication rates. Adequate pre-operative planning is a must for successful outcome of cervical spine surgeries.

Keywords: Deglutition, Loosening, VAS score, Nurick score

INTRODUCTION

Anterior cervical spine surgery has been used for the treatment of cervical disc herniation, spondylosis, neoplasm, trauma, osteomyelitis and ossification of the posterior longitudinal ligament.[1,2] This method including anterior cervical decompression, fusion, and anterior stabilization is a well-established technique, but it has some complications like dysphagia, extrusion of screws and plates, bone graft failure, cerebrospinal fluid leakage, recurrent laryngeal injuries, pharyngoesophageal injuries, prevertebral abscess, airway obstruction, mediastinitis, and carotid artery rupture.[2-4] Here, we present a unique case of a coughed out screw in the mouth, which presented in emergency. The screw may have spontaneously come out, with extrusion of the screw through a rent in the oesophagus which led it to come in the oral cavity after a coughing bout.[6]

CASE REPORT

A 70 years old male, case of Cervical Spondylotic myelopathy (C3-C4, C4-C5) with complaints of difficulty in walking and weakness of upper and lower limbs since 6 months presented to outdoor department. Patient had restricted and painful movements of cervical spine. Patient was evaluated and then operated for anterior cervical discectomy and fusion with bone grafting at C3- C4, C4-C5. Double level plate was used but the available plate was slightly larger than the required size and that was the smallest size available. We tried to direct the screw trajectory downward using the smallest plate available in the set. This prevented the proper locking of proximal

screws. Patient was non-compliant with the use of cervical collar. Once the union of graft appeared adequate, we tried to convince the patient for early removal of the prominent and prouting implant as the proximal screws were backing out but patient refused surgery. He finally presented with a coughed-out screw in his mouth in emergency. Endoscopy did not show any obvious fistula or rent in the oesophagus. Later on, patient agreed for implant removal. Through previous incision implant was exposed and it was removed. We could not identify any obvious rent in oesophagus except an area of probable fibrosis. Recovery was uneventful. After first surgery. Pre Operative VAS Score improved from 8 to 2. Nurick Score improved from grade 4 preop to grade 2 postop. After removal of implant the surgical wound healed well and he did not complaint of any difficulty in deglutition.

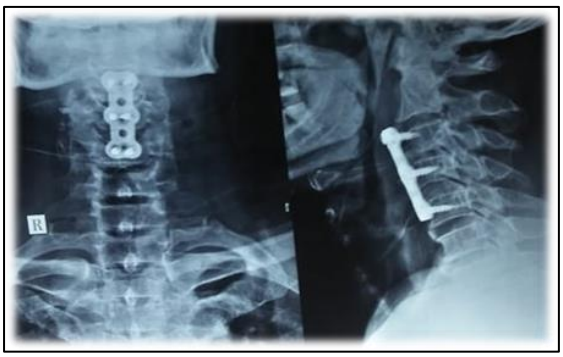

Figure 1: Post operation day 0.

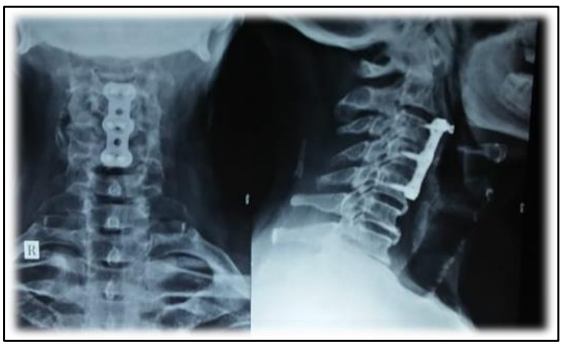

Figure 2: Post operation day 42.

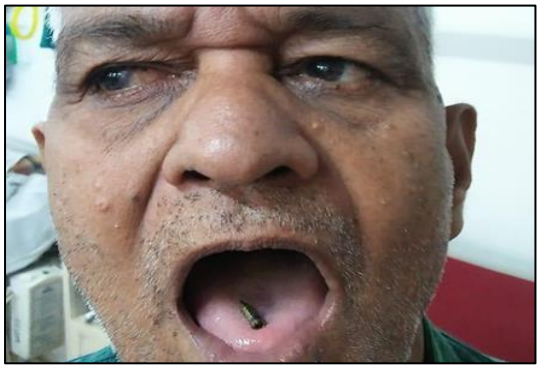

Figure 3: After bout of coughing.

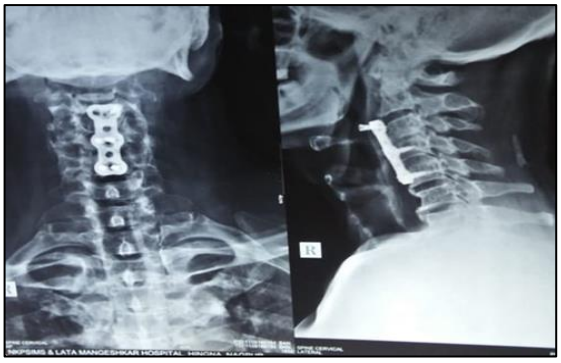

Figure 4: X-ray after bout of coughing.

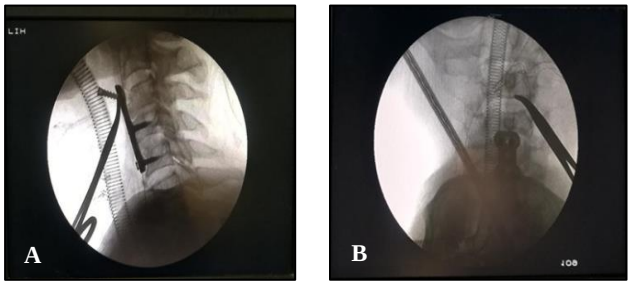

Figure 5 (A and B): Intra operation C-arm pics.

Figure 6: 6 screws and 1 plate.

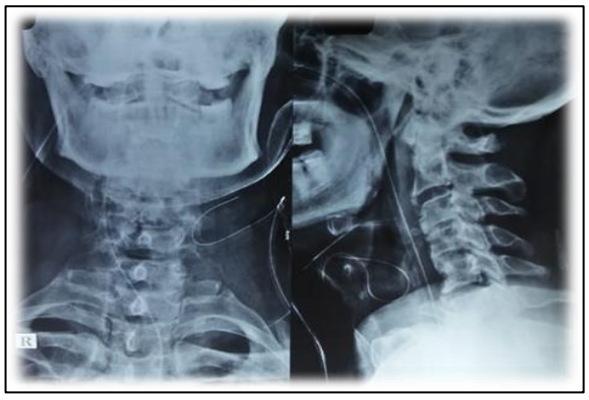

Figure 7: Immediate post Operation X- Ray.

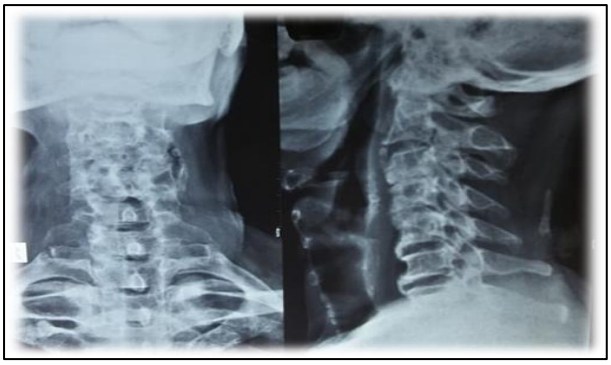

Figure 8: Follow- up X-ray.

DISCUSSION

Anterior cervical plating is a common procedure performed for various indications.[1,2] Early and late complications pertaining to esophageal injury is reported in literature and are not uncommon. Early presentation is due to injury to esophagus while doing exposure and instrumentation.[6] Patient presents with disproportionate dysphagia, wound dehiscence and fatal mediastinitis. Late presentation is because of chronic injury by prominent and backed out implant or displaced bone graft. Our patient had a delayed presentation probably because he was asymptomatic. Thorough pre-operative work up, checking of all proper implant sizes a day before surgery, pre-operative templating might be useful to avoid improper implant sizes, good surgical skills have no alternative to attain the desired surgical goal. Proper sizing of bone graft is always an issue for double level surgery, so it might be wise to use titanium or peek cages as it saves time and reduces morbidity. Using a burr to even out the endplates and making the surface of bone graft uniform along with proper pre bending of plates will help reduce the plate being off. We also propose the use of ZERO-P cages with inbuilt screws which might be more useful to avoid these complications of plating. Always use a RT (Ryle's tube) for anterior cervical spine surgery, better to put RT before intubation.

CONCLUSION

Loosening of implants after anterior cervical spine fusion surgeries adds morbidity to the procedure. Proper size and lowprofile implants with good locking mechanism can reduce the complication rates. Adequate pre -operative planning is a must for successful outcome of cervical spine surgeries. Ensuring the availability of proper size implant is of vital importance. It should be mandatory to ensure that all standard sizes of plates and screws are available on table. Backed out and prominent implant should be taken out to avoid oesophageal injury

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