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C-0237 - NAVIGATED ANTERIOR TRANSPEDICULAR SCREW, A SALVAGE PROCEDURE FOR ANTERIOR PLATE LOOSENING

V. García Milán, J.M. Esteban García, D. Suárez Fernández, P. López Gómez, C. Santos Jiménez, C. Mora Díez, R. Martín Láz and J.Á. Martínez Agüeros

Servicio de Neurocirugía, Hospital Universitario Marqués de Valdecilla, Santander, Spain.

Resumen

Objectives: Cervical anterior transpedicular screws (ATPSs) might be an efficient procedure in selected cases. Its main role described in the literature consists in supplementing anterior plate constructs after corpectomy and bone graft reconstructions. Our objective is to show its usefulness as a rescue surgery presenting a case of anterior plate loosening. This strategy saved our patient an extra posterior approach.

Methods: We report the case of a 54-year-old male diagnosed with disseminated lung adenocarcinoma. The patient suffered from an uncontrollable neck pain. The physical examination revealed paresthesia and paresis in both upper extremities. Imaging showed multiple bone metastases including C5 and C6 pathological fractures resulting in regional kyphosis and medullary compression. Consequently, a palliative surgery was planned. A double corpectomy with anterior plate fixation was performed. After two days of postoperative clinical improvement, the patient experienced progressive dysphagia and symptom recurrence. The urgent radiology evidenced inferior screw and plate loosening. The most common strategy consists in anterior revision supplemented with a posterior arthrodesis. In our case an anterior revision surgery and a tricolumnar ATPS with O-arm™ navigation guidance was performed.

Results: The ATPS was entirely placed through the vertebral body and the ipsilateral pedicle and lateral mass. The patient was discharged with a significant improvement of his preoperative status. The construct did not present signs of mechanical failure during subsequent reviews.

Conclusions: Hardware loosening is a relatively frequent complication in osteoporotic and oncological patients. It usually calls for additional and more aggressive arthrodesis, expending extra resources and exposing them to further complications. Therefore, revision surgeries should balance between a weakened postoperative patient and our objective. ATPSs may constitute a good rescue strategy in anterior plate loosening. We showed how optimizing instrumentation position with neuronavigation assistance and a tricolumnar fixation can avoid an extra posterior fusion approach and its complications, particularly in fragile patients.