Neurocirugia. 2019;30(Espec Congr):2

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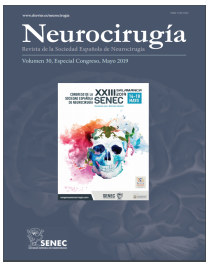

C0019 - MINIMALLY INVASIVE POSTERIOR CERVICAL PEDICLE SCREW FIXATION: RESULTS FOR 54 SCREW INSERTIONS

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Resumen

Objectives: To assess the accuracy, safety, and long-term results of minimally invasive posterior transmuscular CPS insertion.

Methods: Between 2017 and 2018, 10 patients with traumatic dislocations at the subaxial cervical spine were treated with CPS fixation. In 6 cases, ankylosing spondylitis was verified. Computed tomography (CT) and magnetic resonance imaging (MRI) were used to determine the optimal trajectory for CPS, implant parameters, and localization of skin incisions. Minimally invasive transmuscular approaches and cannulated instruments were used for screw insertion. Control CT scans were performed the following day, and 3 and 12 months post-surgery. Long-term clinical outcomes were assessed using ASIA scale, JOA score, Neck disability index and SF-36 score.

Results: Themodified Gertzbein and Robbins classification graded 45 screws as grade I, 7 as grade II, and 2 as grade III. No intraoperative complications occurred. Three patients with deep neurological deficit (ASIA A) died due to non-surgical complications in the late postoperative period. Mean follow-up period was 12 (range 6-20) months. Fusion was achieved in all cases

Conclusions: A minimally invasive CPS insertion technique using the paravertebral transmuscular approach is feasible and safe, and may be an alternative to routine CPS insertion through the midline approach or lateral mass screw fixation. It may reduce the bone-baring area and allow optimal CPS trajectory without additional cervical muscle damage. Accuracy and safety of screw insertion were comparable with literature data. Further evaluation of this technique should be conducted in a larger series.

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