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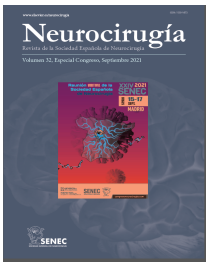

C-0378 - WHAT TECHNIQUE IS PREFERABLE FOR THE SURGICAL TREATMENT OF JEFFERSON FRACTURE? ANALYSIS OF RESULTS FOR 42 CONSECUTIVE PATIENTS

I. Lvov, A. Grin, A. Kordonskiy, U. Khushnazarov and V. Krylov

Sklifosovsky Research Institute for Emergency Medicine, Moscow, Russia.

Resumen

Objectives: To analyse long-term results for different techniques of surgical treatment of patients with unstable C1 fractures.

Methods: Between 2008 and 2019, 42 consecutive patients underwent surgical treatment for type II and III C1 fractures. In 27 patients, posterior fixation of the C1-C2 was performed. Minimally invasive and open posterior transarticular fixation (TAF) of C1-C2, or routine Magerl technique, or Goel-Harms technique (GHT) were used. In 12 cases, Ruf's method was applied through the posterior midline and a minimally invasive approach. For two patients, anterior contralateral TAF was the method of choice. One patient with C0-C1-C2 instability was treated with condyle-C1-C2 screw fixation. Mean follow-up period was 4 years (range 0.4-10), and 31 patients were available for follow-up.

Results: Statistical analysis revealed reduced operative time, blood loss volume, severity of postoperative pain and hospital stay for percutaneous posterior TAF and a minimally invasive posterior variation of Rufs technique. For atlanto-axial fixation techniques, C1-C2 fusion was achieved in 93.1% of cases, with stable fibrous fusion in 6.9%. Full or partial C1 ring fusion was achieved in all cases of posterior modification of the Ruf's method. No cases of increase in atlanto-dental interval were observed. According to the SF-36 questionnaire, long-terms outcomes did not significantly differ between the methods, except for differences in the range of motion in the cervical spine.

Conclusions: Posterior monosegmental C1 fixation, according to Ruf's concept, is comparable to other techniques. It allows the performance of minimally invasive fixation of a Jefferson fracture with maximum preservation of the motion of the cervical spine. Further studies of this technique with a larger cohort of patients should be performed for more valuable and adequate comparisons of the posterior Ruf's and C1-C2 stabilizing techniques.