Mémoire original

Traitement opératoire versus conservateur des fractures de type II de l’odontoïde chez le sujet âgé : gradation des niveaux de preuve au travers d’une méta-analyse

Conservative versus surgical treatment for type II odontoid fractures in the elderly: Grading the evidence through a meta-analysis

Z. Yang¹, Z.-Z. Yuan¹, J.-X. Ma, X. Ma*

Department of Orthopaedics Institute, Tianjin Hospital, 406 Jiefang Nan Street, Hexi District, 300211 Tianjin, Chine

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ABSTRACT

Background. – Odontoid fractures are common C-Spine fractures in the elderly. However, the optimal treatment of odontoid fractures in the elderly is still subject to controversy.

Hypothesis. – Surgical treatment has several advantages on conservative treatment, such as reduced mortality and lower incidence of nonunion. This meta-analysis was performed to identify the efficacy of conservative treatment compared with surgical treatment and provide recommendations for using these procedures to treat type II odontoid fractures in the elderly.

Materials and methods. – A systematic search of all studies published was conducted using the PubMed, EMBASE, OVID, ScienceDirect and Cochrane CENTRAL databases. The randomized controlled trials (RCTs) and non-randomized controlled trials (non-RCTs) that compared conservative treatment with surgical treatment and provided data on clinical effects were identified. The included trials were screened out strictly based on the criterion of inclusion and exclusion. The quality of included trials was evaluated. RevMan 5.1 was used for data analysis.

Results. – Twelve studies involving 730 patients met the inclusion criteria. There were 441 patients with conservative treatment and 289 with surgical treatment. The results of meta-analysis indicated that no difference with regard to the mortality was noted (P>0.05) between the two procedures; however, there was statistically significant difference with respect to the nonunion numbers (P<0.05) between the two procedures.

Discussion. – Conservative treatment and surgical treatment are both effective procedures for treating type II odontoid fractures in the elderly. Compared with surgical treatment, there is no significant difference in mortality; with respect to nonunion numbers, conservative treatment numbers are higher than surgical treatment. Due to the poor quality of the evidence currently available, high quality RCTs are required.

Level of evidence. – Level II: low-powered prospective randomized trial meta-analysis.

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* Auteur correspondant.
Adresse e-mail : anny.allan@126.com (X. Ma).
² Zhao Yang and Zhe-Zhen Yuan contributed equally to this work.

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