Occipito-cervical fractures: surgical options
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The upper cervical fracture involve isolated fractures of C1, isolated fractures of C2, complex C1-C2 fractures. To choose the correct treatment either conservative than surgical, it is important to detect if instability of the craniovertebral junction is present. The definition criteria for instability are: the rotation at C0 – C1 > 8°, the translation C0 – C1 > 1 cm (basion – dens), the transverse ligament damaged (Spence’s rule), the atlanto-axial rotation > 45°, the mobility of C1 – C2 > 3mm. The goal of the treatment is to re-establish the correct alignment, to block the excessive movement and to decompress the nerve structures when necessary. Conservative treatment is indicated in isolated fractures of C1 with intact transverse ligament, in C2 Anderson I fracture, in C2 Anderson III fracture with intact transverse ligament, in C2 Hangman’s fractures type I and in non odontoid non Hangman’s fractures. The surgical approach can be anterior or posterior. The indication for the type of treatment is still controversial. The choice of the most appropriate surgical technique is strictly correlated to the pathology responsible for instability and the degree of instability itself. Generally, fixation should be limited to the unstable vertebral level, although in some conditions an occipito-cervical fixation is mandatory. Scrupulous preoperative clinical-radiological planning is fundamental for the correct assessment of instability and the choice of the most appropriate surgical procedure.

REFERENCES