

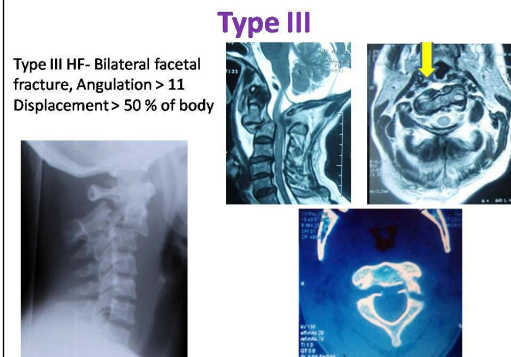
Introduction

Traumatic Spondylolisthesis of Axis (ATS) was first described in 18661 for bilateral pars fracture of C2 and was termed “Hangman’s fracture” nearly a century later in 19652. The fracture which was described in cases of judicial hangings by Woods - Jones3 (1913), was also observed following vehicular accidents4. One factor that can irrefutably be attributed to this fracture is change or evolution not only in what was described in fatality is now seen and managed for deformity with minimal or no neurological deficits with numerous management strategies.

Methods

A group of 10 surgical patients were all diagnosed with radiograph, magnetic resonance imaging (MRI), and CT scans. Initial and final radiographs were measured for anterior translation and angulations of the C2 over C3 . Initial attempts of application of external skull traction as used in all these patients to reduce the fracture. Then an anterior C2-C4 fusion and locking plate fixation was performed. Here the technique lies in the sensible use of C4 as an anchor to elevate the C3 body which is posteriorly dislocated. About 10 patients underwent these anterior surgeries only and all were achieved satisfactory reduction and fusion.

TYPICAL TYPE III HANGMAN FRACTURE



Type III HF- Bilateral facet fracture, Angulation > 11
 Displacement > 50 % of body

THE FILE FIGURE SHOWS THE TYPICAL TYPE III HANGMAN FRACTURE

Results

The follow-up ranged from 06 to 54 months, with an average 39.6 months. There was radiographic evidence of continuity of the fracture at C2 pars was seen in all the patients at the end of 6 months on an average. Neck pain was resolved in nearly all patients after surgery. No hardware failures or infections were observed.

Conclusions

We believe that there is no need single stage 360° fusion nor C3 corpectomy for Type III hangman's fractures. For hangman's fractures with significant deformity and gapping, in our experience that immediate single-stage anterior surgery reduction, instrumentation, and arthrodesis was achieved. Superior maintenance of lordotic curvature and excellent clinical outcome.

SEQUENTIAL TIGHTENING

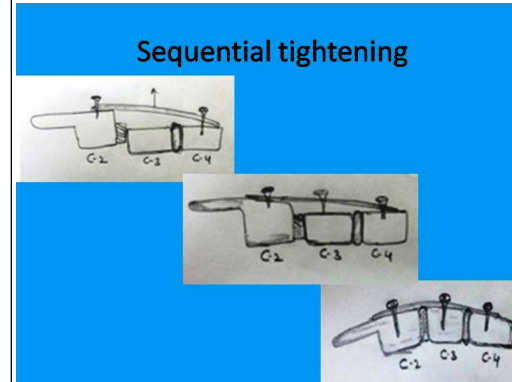


FIGURE SHOWS THE REDUCTION TECHNIQUE

Learning Objectives

. To determine the clinical effectiveness of sole anterior C2-C4 reduction and fusion for the management of unstable type III hangman's fractures

FIG 2 SHOWING IMMEDIATE AND 6 MONTHS POST OP X RAY



THE FIGURE IN THE FILE SHOWS THE FINAL FIXATION OF CONSTRUCT IMMEDIATE POST OP AND FINAL FIXATION AFTER 6 MONTHS

References

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