Management Of Sub-axial Cervical Fractures

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Introduction

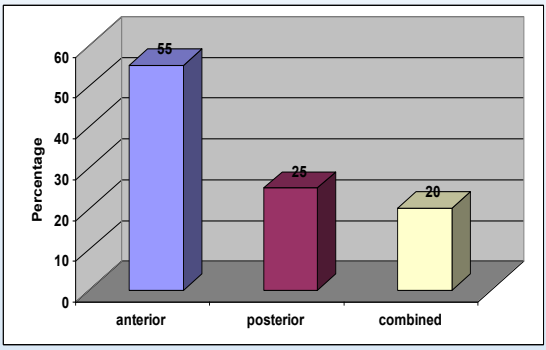
Sub-axial cervical fractures are devastating injuries that affect any age group especially young generations causing major morbidity and may cause mortality.
This study aimed at defining the various lines of management of these serious injuries.

Materials & Methods

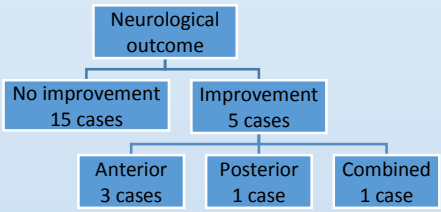
We performed Review of data collected prospectively of 20 patients with sub-axial cervical fractures and/or dislocation presented to the neurosurgery emergency department at Cairo University Hospitals.
Those patients underwent surgical decompression and fixation of the cervical spine via anterior or posterior or combined approaches.

Results

The study included 20 patients, 15 males and 5 females.
Age ranged between 17 and 65 years with a mean age of 32.45 years.
11 patients were operated upon by anterior approach only with percentage of 55%.
5 patients were operated upon by posterior approach only with percentage of 25%.
4 Patients were operated upon by combined anterior and posterior approaches with percentage of 20%.
Improvement of the neurological state occurred only in 5 patients with percentage of 25%, 3 of them had burst fractures and were attacked anteriorly , 2 patients had fracture dislocation one of them was operated upon via combined approach the other was attacked posteriorly.
Other 15 patients showed no improvement with percentage of 75%.



Percentages of patients regarding surgical approach



Conclusion

Management should start at the field by safe transportation and the surgical approach is determined according to the direction of the compressing element.
We recommend the combined approach in cases with cervical fracture and dislocation with 3 columns affection to obtain circumferential arthrodesis of the cervical spine for proper alignment of the column.
Despite it is a lengthy procedure, we think that any other procedure in the 3 column disruption injury, is suboptimal.

Take Home Message

The approach weather anterior or posterior is determined by the compressing element but always consider the circumferential arthrodesis especially in the 3 columns disruption injury.

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