Short Communication

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Odontoid fractures

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A young man with no previous history of any chronic head and neck pain or related neurological problems, was presented with shoulder and neck pain following a motor vehicle accident. There was no radiating pain but the pain severity was worsening following any motion in the neck and was alleviating during neck and shoulder stabilization. On radiologic studies, Type II of the Odontoid fracture of the Axis was confirmed as the diagnosis.

Brief review on odontoid fractures:

Fractures of the Axis as the second cervical vertebrae, include hangman's fractures, odontoid fractures and miscellaneous ones.[1,2–4]

In this study we will have a brief review on Odontoid fractures.

There are three types of Odontoid fractures including Types I, II and III.

In Type I, only the "tip" of the dens is involved. This type of fracture is a rare one.

In Type II, "neck" of the dens in involved.

In Type III, "base" of the dens and body of the Axis are involved.

Type II fractures are the most frequent ones – approximately two-thirds of all odontoid fractures –

CT and MRI scans can be used to detect such fractures and the treatment can be done based on two factors: "Bone displacement amount" and "Injury of ligaments".

Type I fractures can be treated with a semirigid orthosis.

Type II fractures can be treated based on the amount of displacement which 6 mm is used as a reference in this regard. In case the displacement amount would be less than 6 mm, a halo brace, rigid or semirigid orthosis can be used. In more than 6 mm displacement, Internal fixation should be used. [3,4]

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In case this type of fractures would be occurred joined with tranverse ligament disruption,[5] "Atlas-Axis fusion" surgery should be employed for treatment.

Type III fractures can be treated with an orthosis. Surgery can be done in case of nonunion persistence for more than three months.

References

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