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Mini Review Article

Abnormalities of the Craniocervical junction and Upper cervical spine, A brief review on some important clinical pathologies

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Abstract

Various conditions can cause some abnormalities in the craniocervical junction and upper cervical spine region. This is a brief review on the most common pathologies of this area which having knowledge about them is of importance for the clinicians to approach the patients with relevant pathologies with more precision.

Keywords: craniocervical junction; upper cervical spine; abnormalities

Body:

At the location of clivus, neurofibroma, chordoma, glomus, fibrous dysplasia, meningioma and eosinophilic granuloma are the neoplastic diseases. Rickets, basilar invagination, basilar impression and Paget's are the acquired diseases of this region while neurenteric cysts and Atlas segmentation failure, are the congenital diseases of the clivus.

At the location of Atlas, Morquio's syndrome and stenosis in achondroplasia are the acquired diseases while Atlas segmentation failure is the congenital disease of this region.

At the location of Axis, osteomyelitis, basilar invagination and basilar impression are the acquired diseases while neurenteric cyst, dystrophic Os and Axis segmentation failure are congenital ones.

Giant cell tumor, meningioma, osteoid osteoma, chordoma, neurofibroma and osteoblastoma are the neoplastic diseases which can involve Atlas and Axis.

In general, abnormalities of the craniocervical junction and upper cervical spine include various pathologies like ankylosing spondylitis, rheumatoid arthritis, neoplasms, traumatic and post-traumatic, congenital, post-surgical and infectious ones.

Congenital abnormalities include Klippel-Feil syndrome, Morquio's syndrome, chiari malformations, atlantoaxial dislocation, Down's syndrome and occipitalization of the Atlas.

External immobilization can be used to treat the fractures of the Atlas, Axis or the occipital condyles.

There are various surgical approaches to treat the craniocervical junction pathologies including Lateral extrapharyngeal-transcervical, Dorsolateral/far lateral/lateral cerebellar, Expanded endoscopic endonasal, Transoral-transpalatopharyngeal, Lateral basal with infratemporal fossa exposure, Transsphenoethmoid, Posterior midline suboccipital atlantoaxial laminectomy, Transfacial, Transbasal and Lateral transcondylar approach

Conclusion:

Having knowledge about the pathologies which can involve the craniocervical junction and upper cervical spine region and also surgical treatment strategies for such pathologies is of great importance for clinicians to treat such pathologies with more precision and in case of performing surgery, with lowest surgical complications at the bedside.

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