Pediatric cervical spine instability

An atlantodental interval (ADI) of more than 5 mm on lateral cervical spine radiography indicates instability [1) 2)]. This is more than the 3-mm adult value because of the increased cartilage content of the odontoid and ring of the atlas in children, as well as the increased ligamentous laxity in children. In extension, overriding of the anterior arch of the atlas on top of the odontoid also can be seen in up to 20% of children [3)].

Treatment

see Pediatric cervical spine instability treatment.

1)
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2)
Locke GR, Gardner JI, Van Epps EF. Atlas-dens interval (ADI) in children: a survey based on 200 normal cervical spines. Am J Roentgenol Radium Ther Nucl Med. 1966 May;97(1):135-40. PubMed PMID: 5938031.
3)
Cattell HS, Filtzer DL. Pseudosubluxation and other normal variations in the cervical spine in children. A study of one hundred and sixty children. J Bone Joint Surg Am. 1965 Oct;47(7):1295-309. PubMed PMID: 5837630.