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Posterior Arch Defect of the Atlas in a Patient with Acute Trauma

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A 30-year-old man was admitted to the emergency department with head and neck trauma after a low velocity road traffic accident. The patient had complaints of neck pain. The physical and neurological examination and the plain radiographs of head and cervical spine revealed no abnormalities. Computed tomography showed a posterior arch defect of the atlas, which is encountered in 3-5 % of population (Figure 1 and 2) [1]. Magnetic resonance

imaging (MRI) demonstrated the absence of any soft tissue injury (Figure 3). The patient was treated with conservative medical treatment and the neck pain resolved within three days.

References:

1) Sabuncuoglu H, Ozdogan S, Karadag D, Timurkaynak E. Congenital hypoplasia of the posterior arch of the atlas: Case report and extensive review of the literature. Turk Neurosurg 2011; 21: 97-103.

2) Currarino G, Rollins N, Diehl JT. Congenital defects of the posterior arch of the atlas: a report of seven cases including an affected mother and son. Am J Neuroradiol 1994; 15: 249-254.

Figure Legends:

Figure 1: Axial CT scan showed a Type A posterior arch fusion defect of the atlas according to the Currarino's classification [2].

Figure 2: Sagittal CT scan demonstrated the defect on the posterior arch and showed no other pathologies including fractures, subluxation or instability.

Figure 3: Sagittal T2-weighted MRI of craniocervical region revealed the absence of any soft tissue injuries, including hematoma, traumatic disc herniation or ligamentous injuries.

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