"Something Is Missing": A Case Report

Abdul Rahman NR, Aziz MY
Department of Orthopaedics, Hospital Sultan Haji Ahmad Shah, 28000 Temerloh, Pahang.

INTRODUCTION:

Congenital anomalies of the posterior arch of atlas are rare. They may range from partial absence to complete agenesis. They are usually discovered incidentally. Majority of patients are asymptomatic. However, neck pain and/or neurological symptoms may be present after minor injury to the head or neck. We report a case of bilateral partial agenesis of the posterior arch of the atlas with persistent posterior tubercle, presenting as acute left hemiparesis.

CASE REPORT:

A 31-year-old lady presented with acute left hemiparesis upon waking up from sleep, without preceding trauma. She gave a history of left upper extremity weakness 6 months prior, which resolved spontaneously. There was no neck pain or tenderness. Myotomes in left upper and lower extremities were 0/5 but with normal tone and reflexes and intact sensation. Radiographs and CT of cervical spine are shown in Figures 1 and 2, respectively. She completely spontaneously recovered over 12 hours. During her last review 6 months later, she was well but complained of occasional numbness in her left upper extremity, without neck pain.

DISCUSSION:

Currarino et al classified congenital anomalies of the posterior arch of atlas into five types: A – failure of posterior midline fusion of the two hemiarches; B – unilateral cleft; C – bilateral clefts; D – absence of the posterior arch with persistent posterior tubercle; E – absence of the entire posterior arch including the posterior tubercle[1,2]. Types C and D may present with neurological symptoms and chronic changes in the spinal cord due to the free-floating posterior tubercle[2]. Currarino et al also subdivided the patients into five clinical groups: 1 – asymptomatic incidental finding; 2 – neck pain or stiffness after trauma to the head or neck; 3 – chronic symptoms referable to the neck; 4 – various chronic neurological problems; 5 – acute neurological symptoms after minor cervical trauma[1,2]. Our patient could be classified as Type C, subgroup 4. Being asymptomatic, majority of cases can be managed conservatively. However, symptomatic patients are best managed operatively to prevent further damage to the spinal cord.

Figure 1: Lateral radiograph of the cervical spine reveals partial absence of the posterior arch of the atlas, with persistent posterior tubercle.

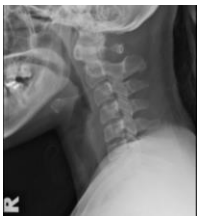
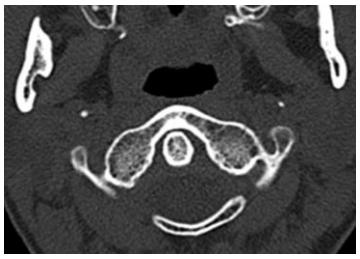


Figure 2: Axial CT image of the atlas shows bilateral partial agenesis of the posterior arch of the atlas with persistent posterior tubercle



CONCLUSION:

Congenital anomalies of the posterior arch of atlas are rare. Most are asymptomatic and discovered incidentally. Its awareness is important to avoid diagnostic errors, which can affect management.

REFERENCES:

1. Currarino et al. Congenital defects of the posterior arch of the atlas: a report of seven cases including an affected mother and son. AJNR Am J Neuroradiol 1994; 15: 249-54.
2. Sabuncuoglu et al. Congenital hypoplasia of the posterior arch of the atlas: case report and extensive review of the literature. Turkish Neurosurgery 2011; 21(1): 97-103.