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Basilar invagination in headache associated with physical exertion and recurrent torticollis

Invaginação basilar em cefaleia associada ao esforço físico e torcicolo recorrente

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A 52-year-old man presented with a 2-year-history of recurrent torticollis and headache associated with physical exertion (including evacuation). His physical examination disclosed short neck and brachycephaly. Neuroimaging studies (Figures 1 and 2) revealed basilar invagination and brainstem compression without other craniocervical junction abnormalities or systemic diseases. Basilar invagination[1] must be included in the differential diagnosis of exercise-induced headache with recurrent torticollis[2], especially if pyramidal signs, ataxia or other cranio-vertebral anomalies in the neuraxis are present[1,3].

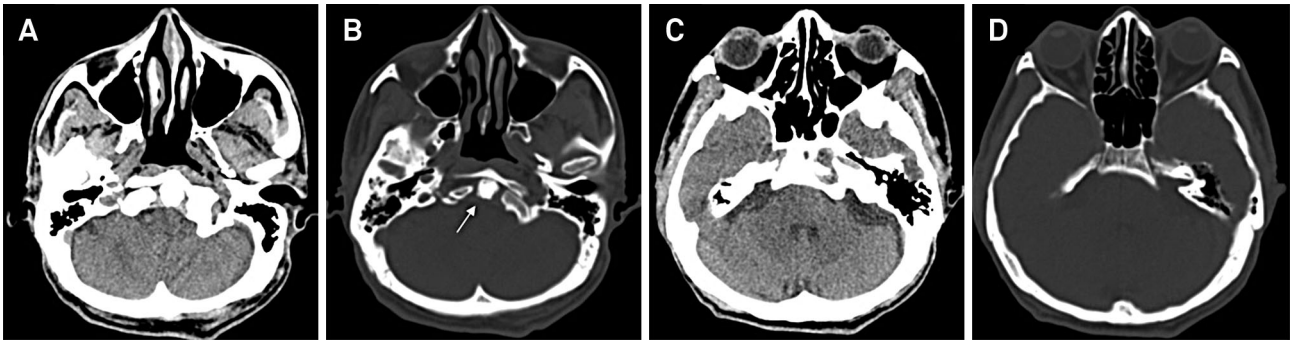

Figure 1. (A-D) Noncontrast cranial CT axial slices showing a higher position of the odontoid (white arrow).

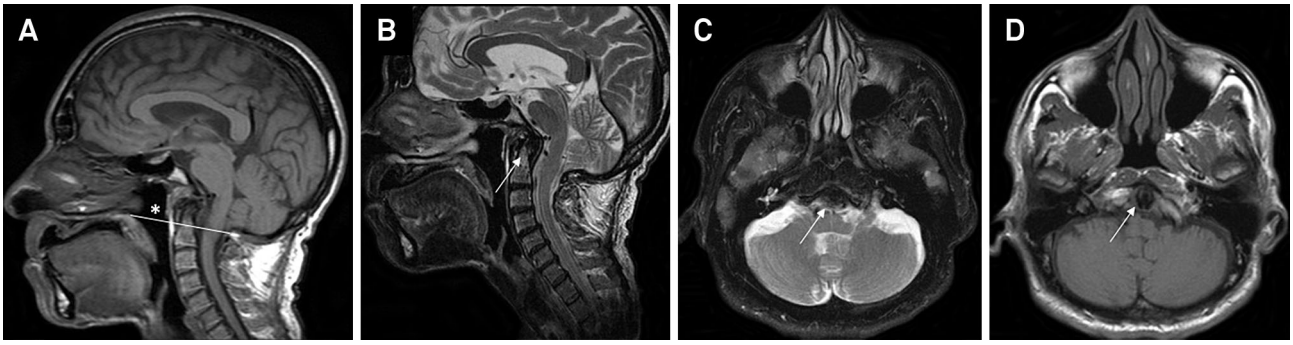

Figure 2. (A) T1-weighted and (B) T2-weighted midsagittal MR images showing important compression of the brainstem and medulla oblongata and a higher position of the tip of the odontoid process with a greater extension than 5 mm above the Chamberlain line (white asterisk, white line); (C) T2-weighted and (D) T1-weighted axial MR images unvealing ventral compression of medulla oblongata (odontoid process shown by white arrow).

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