

The Eagle jugular syndrome

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Background

The elongation of the styloid process is historically associated with two variants of the Eagle syndrome. The classic one, mainly characterized by pain and dysphagia, and the carotid variant characterized by pain and sometimes by cerebral ischemia. We observed a further variant characterized by a styloid elongation coursing adjacent to the transverse process of C1 (Figure 1), causing significant compression of the internal jugular vein.¹⁻⁴

Methods

We revised all the cases of Eagle syn-

drome, including the jugular variant, admitted in our Hospital in the last six years. We compared symptomatology, associated comorbidities and imaging. Data were statistically analyzed.

Results

Overall 23 patients were admitted to the Hospital for symptomatic elongation of the styloid process, 11 male and 12 females. The jugular variant of the Eagle syndrome (Figure 1) is clinically delineated by significant differences, as compared with the classic variant and carotid variants. Headache was the more prominent symptom ($P < 0.009$) as well as a documented peri-mesencephalic hemorrhage was the more significant comorbidity ($P < 0.0003$). The group classic-carotid variant was characterized by ipsilateral pain compared to the jugular variant ($P < 0.0003$). CT angiography with venous phase extended to the neck veins and imaging reconstruction is highly recommended as imaging technique, complemented by color-Doppler ultrasound.

Conclusions

The elongation of the styloid process may have different paths, which creates compression on the surrounding anatomical structures. There may be a possible association of jugular impingement by an elongated styloid process with symptoms.

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Figure 1. CT angio of the illustrative case showing a right jugular internal vein bone nutcracker between the C1 transverse process and the elongated styloid process. A) Axial cut; B) Longitudinal reconstruction; C) 3D reconstruction.