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Case Report

Cervical Neuralgia Revealing Eagles Syndrome about a Presentation

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Introduction

Eagle syndrome, first described by Watt Weems Eagle in 1937 [1], is a rare disease affecting approximately 4 to 8 people in 10,000 [2]. It is more common in women than in men (ratio 2:1) and in people aged over 50 [3]. It is characterized by an elongation of the styloid processes and/or calcification of the vite hyoid ligament, classically unilateral or more rarely bilateral [4]. Some patients with elongated styloid processes may never experience clinical symptoms; the abnormality may be an incidental finding during a CT scan. Differential diagnoses include temporomandibular disorders, ear pathologies, skeletal neck pain, trigeminal and glossopharyngeal neuralgia. Here we report a case diagnosed with right c5 neck pain.

Key words: Cervicalgia; Eagles syndrome

Case Presentation

Healthy 8-year-old man with a history of neck pain with irradiation to the right acromial level progressive for 15 days. The neurological manifestations began with progressive paraesthesia of the upper limbs of proximal location evolving towards the cervical part. In addition, he reported a new transient generalized band-shaped headache and slight dizziness. The medical history was unremarkable except for hypertension.

General physical examination

Good general condition, good coloring of the mucous membranes, good state of hydration.

Vital parameters

Body temperature of 36.5°C, blood pressure of 105/75 mm Hg, respiratory rate of 16 bpm, pulse of 65 beats/min and oxygen saturation of 99%.

Neurological examination

Motor examination revealed normal tone and strength compared to the Medical Research Council score. The osteotendinous reflexes were unremarkable. Sensory examination unremarkable. The remainder of the examination was unremarkable. All conventional diagnostic tests were essentially normal, including EKG, routine blood chemistry, protein C-. Some additional examinations were carried out, notably electro neuromyography and cervical imaging.

Electromyography showed reduced recruitment to the right deltoid muscles. The findings were consistent with right c5 radiculopathy. A medication consisting of non-steroidal anti-inflammatory and analgesic with relief of pain and an opinion requested from an ENT specialist (Figure 1).

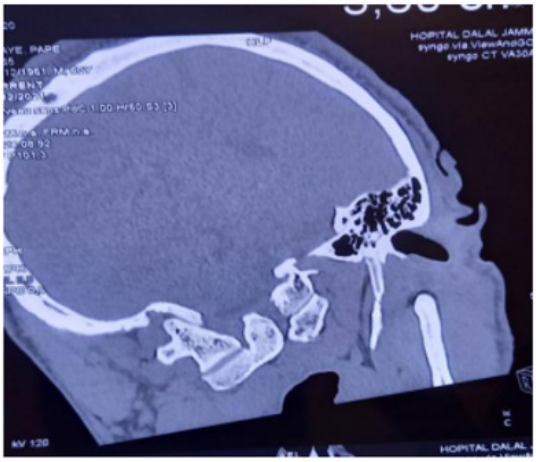

Figure 1: Imaging in favor of hypertrophy of the mastoid processes:
CT sagittal paramedian section: Increase in the length of the styloid measures to the right at 35 mm.

Discussion

Anatomically, the styloid process arises from the temporal bone and passes downward, forward, and medially. Embryologically, it is derived from Reichert's cartilaginous component of the second branchial arch. Ossification of the styloid process and the Stylohyoid ligament results in an increase in the thickness and length of the Styloid process, which then presses on adjacent structures such as the internal jugular vein, carotid artery, facial nerve, nerve vagus, the glossopharyngeal nerve and the hypoglossal nerve. , leading to various pressure symptoms [5].The styloid process is normally 2.5 to 3 cm long; when the length exceeds 3 cm, it is said to be elongated [6-7].

The etiopathogenetic mechanism of elongation of the styloid process has not been established until now; developmental abnormalities and/or alterations in bone homeostasis have been proposed to explain the occurrence of ossification or elongation of the stylohyoid process [8]. Symptoms of classic Eagle syndrome have been primarily associated with Intermittent compressive neuropathy involving different branches of the cranial nerves, which is often exacerbated by swallowing and yawning [9].

These symptoms are caused by a mass effect on the cranial nerves causing neuropathy pain that responds poorly to medications as is the case with our patient. Patients with vague symptoms of head and neck pain may lead to a broad differential diagnosis [5-11].

Medical history is the primary guide for the diagnosis of Eagle syndrome. The patient's description of symptoms is very important. Next, it is necessary to do a local examination by palpating the tonsillar fossa, which should reveal bone formation and should exacerbate the pain aggravating the symptoms with local tenderness. Usually, patients have temporary relief of symptoms from local lidocaine infiltration. The radiological examination confirms the diagnosis: an orthopantomography and a CT scan are necessary [12-15]. Many factors can determine changes in the structure of the styloid process and its shape, position and size can vary [16].

A wide variety of symptoms have been attributed to elongation of the styloid process [1]. The use of computed tomography is indicated for diagnosis, although an accurate history, local examination and orthopantomography are also necessary [15]. Nowadays, literature tends to support that surgical treatment results in a more definitive and lasting symptomatic relief [10-17].

Conclusion

Eagles' syndrome is a pathology characterized by an abnormal elongation of the styloid process, the latter of which slightly irritates the cervical structure and is responsible for either neck pain or other symptoms.

Symptomatic and disappointing treatment and curative treatment is based on surgery.

Acknowledgement

None.

Conflict of Interest

No conflict of interest.

References

1. ELONGATED PEN PROCESSES: Report of Two Cases | JAMA Otolaryngology–Head & Neck Surgery | JAMA Network.
2. Masanori Kawasaki, Sunao Hatashima, Tomio Matsuda (2012) Non-surgical therapy for bilateral glossopharyngeal neuralgia caused by Eagle's syndrome, diagnosed by three-dimensional computed tomography: a case report. J Anesth 26(6): 918-921.
3. Saccomanno S, Greco F, DE Corso E, Lucidi D, Deli R, et al. (2018) Eagle's Syndrome, from clinical presentation to diagnosis and surgical treatment: a case report. Acta Otorhinolaryngol Ital 38(2): 166-169.
4. Baddour HM, McAnear JT, Tilson HB (1978) Eagle's syndrome: Report of a case. Oral Surg Oral Med Oral Pathol 46(4): 486-494.
5. Mendelsohn AH, Berke GS, Chhetri DK (2006) Heterogeneity in the clinical presentation of Eagle's syndrome. Otolaryngol-Head Neck Surg Off J 134(3): 389-393.

6. Umberto Buono, Giuseppe Michele Mangone, Ambra Michelotti, Francesco Longo, Luigi Califano, et al. (2005) Surgical approach to the stylohyoid process in Eagle's syndrome. J Oral Maxillofac Surg 63(5): 714-716.

7. C Cinar Başekim, Hakan Mutlu, Atila Güngör, Emir Silit, Zekai Pekkafali, et al. (2005) Evaluation of styloid process by three-dimensional computed tomography. Eur Radiol15(1): 134-139.

8. David J Fusco, Shahab Asteraki, Robert F Spetzler (2012) Eagle's syndrome: embryology, anatomy, and clinical management. Acta Neurochir (Wien) 154(7): 1119-1126.

9. Ciorba A, Savini S, Morolli F, Malagò M, Bianchini C, et al. (2014) Orofacial pain and Eagle Syndrome: cues from a clinical series. Minerva Stomatol 63(10): 361-367.

10. Carmen Mortellaro, Patrizia Biancucci, Giuseppe Picciolo, Vittorio Vercellino (2002) Eagle's syndrome: importance of a corrected diagnosis and adequate surgical treatment. J Craniofac Surg 13(6): 755-758.

11. Abie H Mendelsohn, Gerald S Berke, Dinesh K Chhetri (2006) Heterogeneity in the clinical presentation of Eagle's syndrome. Otolaryngol-Head Neck Surg 134(3): 389-393.

12. Fini G, Gasparini G, Filippini F, Becelli R, Marcotullio D (2000) The long viteid process syndrome or Eagle's syndrome. Journal of Cranio-Maxillofacial Surgery 28(2):123-127

13. Carmen Mortellaro, Patrizia Biancucci, Giuseppe Picciolo, Vittorio Vercellino (2002) Eagle's syndrome: importance of a corrected diagnosis and adequate surgical treatment. J Craniofac Surg 13(6): 755-758.

14. Kishore Chandra Prasad, M Panduranga Kamath, K Jagan Mohan Reddy, Krishnam Raju, Saurabh Agarwal, et al. (2002) Elongated Styloid process (Eagle's syndrome): a clinical study. J Oral Maxillofac Surg 60(2): 171-175.

15. Evans JT, Clairmont AA (1976) The nonsurgical treatment of Eagle's syndrome. Eye Ear Nose Throat Mon 55(3): 94-95.

16. EAGLE WW (1937) ELONGATED PEN PROCESSES: Report of Two Cases. Arch Otolaryngol, 25: 584-587.

17. Umberto Buono, Giuseppe Michele Mangone, Ambra Michelotti, Francesco Longo, Luigi Califano, et al. (2005) Surgical approach to the stylohyoid process in Eagle's syndrome. J Oral Maxillofac Surg 63(5):714-716.