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Review Article

A Rare Cause for Cervical Pain: Eagle's S

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Abstract

Patients with pharyngodynia and neck pain symptoms can lead to Eagle's syndrome. Eagle's syndrome must be taken in account. Eagle defined "stylalgia" as a syndrome caused by elongation of the styloid process or to mineralization of the stylohyoid ligament complex or to ossification of Reichert's cartilage of the second branchial arch. The styloid process is a part of the temporal bone that lies anteriorly to the mastoid process. The syndrome is rare in the general population. Usually asymptomatic, it occurs in adult patients. It is often associated with tonsillar fossa and sometimes accompanied by dysphagia, odynophagia, and otitis media with effusion. In some cases, the stylohyoid apparatus compresses the perivascular sympathetic fibers, resulting in a persistent pathogenesis of the syndrome is still under discussion.

1. Introduction

It was Eagle in 1937 that first defined "stylalgia" as an autonomous syndrome caused by elongation of the styloid process or to mineralization of the stylohyoid ligament complex [1].

The stylohyoid complex is made of styloid process, stylohyoid ligament, and hyoid bone. These structures are derived from Reichert's cartilage of the

elongated conical projection of the temporal bone that lies anterior external carotid arteries, and laterally the tonsillar fossa. In this space, the facial, glossopharyngeal, vagus, and hypoglossal nerves, the stylohyoid, the styloglossal, and the stylopharyngeal muscles, and the parotid duct originate [4, 5].

The normal length of the styloid process is individually variable, [6]. The incidence of Eagle's syndrome varies among population [2, 7]. Usually asymptomatic, it occurs in adult patients affected more often than males [4]. Rarely, the anatomical condition

Eagle primarily described two syndromes [1]:

- (1) *Classic styloid syndrome*: it frequently follows tonsillectomy, localized in the tonsillar fossa and sometimes accompanied by foreign body sensation, and more rarely by temporary voice changes;
- (2) *The stylo-carotid syndrome*: it is not correlated with tonsillectomy, the apparatus compresses the internal and/or the external carotid arteries and sympathetic fibers, resulting in a persistent pain irradiating in the

Pathogenesis is still being debated. Surgical trauma or local chronic inflammation of the stylohyoid complex with consequent reactive ossifying hyperostosis elements is able to produce osseous tissue in adults [8]. Residual surgical trauma or mechanical stress during the development of the styloid process. The anatomic anomaly of the styloid process could be genetically transmitted. Abnormal development of the styloid process is also associated with ossification [12]. Ossification of the stylohyoid ligament should be also related to the condition [13].

Eagle's syndrome is treated surgically and nonsurgically [14]. Medical treatment with infiltration of steroids or anesthetics in the tonsillar fossa has been the first choice. Styloidectomy can be performed by an intra- or an extraoral approach. The intraoral approach results in a restricted operative field, in the possibility of an incomplete resection of the styloid process, and in the risk of deep cervical infections. On the other hand, the extraoral approach results in cutaneous scars, longer hospitalization, and risks of facial nerve injury in the experience of the surgeon.

2. Report of a Case

A 42-year-old female came to our Institution to evaluate pharyngeal pain and difficulty swallowing of the throat for over 1 year. The patient was very compliant, and no other symptoms were reported. The styloid process could be palpated intraorally posterior to the right tonsillar fossa. The Orthopantomography showed the elongation of the right styloid process. The Orthopantomography scans were taken for better defining length, angulation, and anatomical position. The scans revealed a 3, 1 cm in length right styloid process (Figure 1). A diagnosis of Eagle's syndrome was made and an intraoral surgical treatment under general anesthesia was performed. The styloid process was identified by palpation. Due to the anatomical position, tonsillectomy was not planned. The muscles of the pharyngeal wall were retracted and an incision was made on the periosteum at the tip of the styloid process. The styloid process was exposed (Figure 2). 1 cm of the caudal part of the styloid process was resected. The incision wall was sutured. Tonsillectomy was not required and haemorrhage did not occur preoperatively and once postoperatively. The patient was discharged after 24 hours. The patient was symptom-free.



Figure 1: preoperative CT scan showing elong



Figure 2: intraoperative view of the surgical site completely exposed.

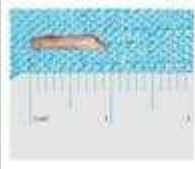


Figure 3: 1 cm resected from the distal part

3. Discussion

Patients with vague head and neck pain symptoms can lead to an incorrect diagnosis. The main guide for the diagnosis of Eagle's syndrome. The physical examination is important. Then, it is necessary to make a local examination palpation and should exacerbate pain aggravating symptoms with relief of symptoms from the local infiltration of lidocaine. Radiographic examination including orthopantomography and CT scans are required [4, 5, 7, 15].

Many factors can determine changes in the structure of the styloid process size [1, 3, 8, 13]. A wide variety of symptoms have been attributed to Eagle's syndrome.

Using CT scans is indicated for diagnosis, although also an orthopantomography are required [4, 5, 7, 15]. The surgical treatment of Eagle's syndrome. When it is possible, the transoral approach is preferable. An intraoral approach is a less consuming procedure than an extraoral approach and there is an advantage of the intraoral approach in cases of Eagle's syndrome with palpable styloid process.

When dealing with cases of cervical pain, the possibility of an Eagle's syndrome should be considered.

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