Eagles Syndrome : A Case Report

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Abstract: Elongation of the styloid process or stylohyoid ligament calcification is a well recognized finding of dental practice, and an incidence of 4 to 30 percent has been reported on radiographs. Eagle syndrome is an aggregate of symptoms caused by an elongated ossified styloid process, the cause of which remains unclear. Ossification of the stylohyoid and stylomandibular ligament causes prolongation of the styloid process and clinical symptoms. Eagle's syndrome is defined as the symptomatic elongation of the styloid process or mineralization of the stylohyoid ligament complex. The symptoms related to this condition can be confused with those attributed to a wide variety of facial neuralgias. Here we report a case of eagle syndrome in which patient exhibiting unilateral symptoms with bilateral elongation of styloid process is reported and the literature is reviewed.

Key words: Styloid process, Stylohyoid Ligament, Facial Neuralgia, Ossification.

INTRODUCTION

Eagle's syndrome was first described by an American Otorhino laryngologist Watt Keems Eagle in 1937. Styloid process is normally a slender; cylindrical bone that arises from the temporal bone in front of the stylomastoid foramen which is normally varies from 2.0 to 2.5 cm in adults.†

Eagle further described it as atypical facial neuralgia and reported that it has various symptoms like feeling of a foreign body lodged in the throat, difficulty and pain during swallowing, throat pain, pain on turning the head, pain in infraorbital, infratemporal, ear and occipital areas, pain on wide opening of mouth, headache, tinnitus and vertigo. Eagle's syndrome is characterised by the following symptoms: pharyngeal pain localised in the tonsillar fossa, radiating to the oesophagus, to the hyoid bone, painful head rotation and lingual movements.† Male : female ratio is 1.3. Bilateral is quite common, but symptoms are mostly unilateral.† There is high variability in prevalence studies about elongated styloid process. Specified orofacial pain secondary to calcification of stylohyoid ligament or elongated styloid process has been known as Eagle's syndrome.† Stylohyoid process, long styloid process syndrome, Eagle's syndrome is related to abnormal length of the styloid process, to mineralisation of the styloid ligament complex, or to calcification of digastric muscles.Embryologically, it has been derived from the Reichert's cartilage of the second branchial arch. It is a slender, pointed structure which projects anteroinferiorly from the inferior aspect of temporal bone.†

The actual cause of the elongation is a poorly understood process. Several theories have been proposed: 1) Congenital elongation of the styloid process due to persistence of a cartilaginous analog of the stylohyoid (one of the embryologic precursors of the styloid), 2) Calcification of the stylohyoid ligament by an unknown process, and 3) Growth of osseous tissue at the insertion of the stylohyoid ligament.†

From Eagle's early descriptions, patients were categorized into two groups: those who had classical symptoms of a "foreign body" lodged in the throat with a palpable mass in the tonsillar region following tonsillectomy; and those with pain in the neck following...
the carotid artery distribution (carotid artery syndrome). Although these two types have a common etiology, their symptomatology differ.

The pain aggravates typically on rotation of the head. The cause of onset of pain in patients previously free of symptoms is unknown, but several mechanisms have been proposed that include rheumatic styloiditis caused by pharyngeal infections, trauma, tonsillolactony, and involutitional changes associated with aging (e.g., degenerative cervical discopathy, which may shorten the cervical spine and alter the direction of the styloid process). Elongation of the styloid process or stylohyoid ligament calcification is a well recognized finding of dental practice. Most cases are asymptomatic; however, a small number of such patient’s experience symptoms of Eagle’s syndrome, related to the compression of adjacent nerves and blood vessels. In about 4% of general population an elongated styloid process occurs, while only about 4% of these patients are symptomatic; thus the true incidence is 0.16% with a female predominance of 3:1.

Langlais et al. (1986) classified elongated styloid process and mineralised styloid complexes based on the radiographic appearance and structures as follows:

Type I: the elongated type pattern represents an uninterrupted process.

Type II: characterised by a single pseudoarticulation that seems an articulated elongated styloid process.

Type III: represents an interrupted process that gives the appearance of multiple pseudo-articulations within the ligament.

The diagnosis of ES must be based on a good medical history and physical examination. It should be possible to feel an elongated styloid process by careful intraoral palpation, placing the index finger in the tonsillar fossa and applying gentle pressure. The diagnosis of ES can be ascertained with imaging which includes lateral head and neck radiograph, Towne radiograph, panoramic radiograph, lateral-oblique mandible plain film, etc.

In differential diagnosis, laryngopharyngeal dysesthia has to be considered as well as dental malocclusion, neuralgia of sphenopalatine ganglia, temporomandibular arthritis, glossopharyngeal and trigeminal neuralgia, chronic tonsillopharyngitis, hyoid bursitis, Sluder’s syndrome, histamine cephalgia, cluster type headache, esophageal diverticula, temporal arteritis, cervical vertebral arthritis, benign or malignant neoplasms, and migraine type headache (Harma, 1966). Eagles syndrome can be treated by surgical and non surgical means. Non surgical treatment involve reassurance to the patient, analgesics, and steroid injections. Surgical treatment can be performed using one of two approaches: transpharyngeal or extraoral. The latter is thought to be superior because it is likely to cause deep space infections. Also, barium swallow studies can show the indentation of the elongated styloid process as a filling defect.

CONCLUSION

The elongated styloid process syndrome can be diagnosed by a detailed history, physical examination, and radiological investigations. It can be confused or mistaken for many other conditions that must be excluded. An awareness of pain syndromes related to the styloid process is important to all health practitioners involved in the diagnosis and treatment of neck and head pain. In a non specific orofacial pain there should be a high index of suspicion of stylagia—Eagle’s syndrome.

REFERENCES

Fig : 1 Elongation of styloid process