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Eagle's syndrome-cause for atypical facial pain-case report and review



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ABSTRACT

Eagle's syndrome is caused due to elongation and calcification of the stylohyoid ligament. Though majority of the cases are asymptomatic certain patients do present with mild to severe pain. We report a case of Eagle's syndrome.

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1. Introduction

Eagle's syndrome is defined as the symptomatic elongation of the styloid process or mineralization or calcification of the stylohyoid ligament complex. This syndrome was first documented by Watt W. Eagle an otorhinolaryngologist in the year 1937.[1] Patients are usually asymptomatic and elongated styloid process is seen as an incidental finding on routine radiographs. However in symptomatic patients the symptoms range from continuous pain, foreign body sensation in then pharynx, difficulty in swallowing, otalgia. The symptoms may be confused with other causes of head and neck pain. Conventional imaging and advanced imaging play an important role in the diagnosis of this syndrome. Treatment has traditionally been surgical excision of the styloid process or the mineralized ligaments. A more conservative approach has been to attempt to decrease any muscle spasm and scar tissue around the styloid process and mineralized ligaments. Other treatments include steroid injections into the affected tissues with varying results.[2]

2. Case report

A 47 year old patient reported to us with the chief complaint of vague pain in right side of the neck since 5 years. There was no history of trauma. Past medical history revealed patient underwent tonsillectomy when he was 8 years old. He had a history of visiting many dentists and general practitioners for the same complaint for which he was prescribed analgesic which provided only temporary relief. Intra oral examination was not contributory, but tenderness was present in the right tonsillar fossa. Based on history and clinical examination a provisional diagnosis of cervical spondylitis differential diagnosis considered were atypical facial pain and muscle spasm and eagles syndrome. OPG was first advised as the radiation dose to the patient is comparatively less. OPG revealed elongated styloid process on the right side (Fig. 1). Plain CT in bone window showed elongated styloid process upto the level of hyoid bone measuring 70 mm on the right side (Fig. 2). On the left side styloid process measures 37 mm. There was calcification of stylohyoid ligament on the left side giving a pseudo articulated appearance.

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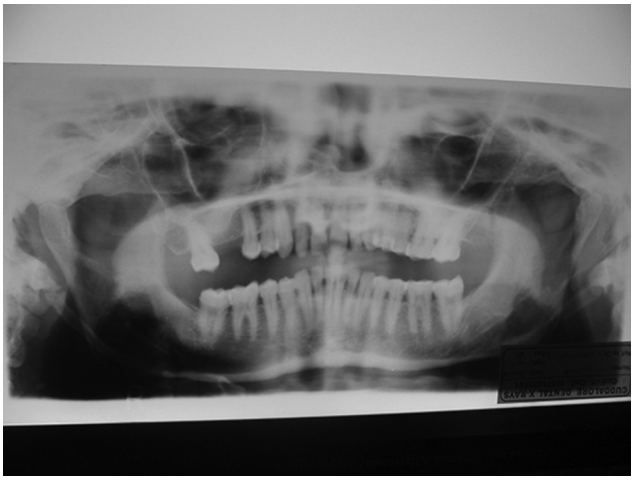


Fig. 1 – Elongated right styloid process.

3. Discussion

In a review of 1771 panoramic radiographs, the incidence of mineralization of the stylohyoid complex was found to be 18.2%.[3] Despite these figures, only 1%–5% of patients are symptomatic.[4]

The styloid process is a small, bony projection of the temporal bone anterior and medial to the stylomastoid foramen. The length of the styloid process ranges from 1.4 cm to 5.8 cm.[5]

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 or other neck trauma (Eagle's syndrome); and those with pain in the neck following the carotid artery distribution (carotid artery syndrome).[6] Traumatic eagle syndrome also has been reported in which symptoms develop after fracture of a mineralized stylohyoid ligament. Pain following tonsillectomy is presumably created by stretching or compressing the nerve or nerve endings of cranial nerves V, VII, VIII, IX, or X in the tonsillar fossa either during healing of scar tissue. The carotid artery syndrome is caused by mechanical irritation of the sympathetic nerve tissue in the walls of the internal and/or external carotid artery by the tip of the styloid process or the ossified ligament. This irritation produces referred pain in the respective area of vascularization.[7] Head and neck imaging mainly include OPG, lateral jaw projections and CT. Langlais and associates in 1986 proposed a radiographic classification which included three types of radiographic appearances. The Type I pattern represents an uninterrupted, elongated styloid process. Type II is characterized by the styloid process apparently being joined to the stylohyoid ligament by a single pseudoarticulation. This gives the appearance of an articulated elongated styloid process and is the type present in our patient. Type III consists of interrupted segments of the mineralized ligament, creating the appearance of multiple pseudoarticulation within the ligament. The finding of an elongated styloid process or calcified/ossified stylohyoid ligament complex is often an incidental finding if asymptomatic, but it has been documented in patients with mucopolysaccharidoses and diffuse idiopathic skeletal hyperostosis each having their own inherent clinical complications.[8]



Fig. 2 – CT showing elongated right styloid process (70 mm) and calcification of stylohyoid ligament.

4. Conclusion

In patients presenting with symptoms of throat pain, facial pain or headache a thorough detailed case history and physical examination of the head and neck are mandatory. The differential diagnosis of neoplasm, unerupted molars, temporomandibular dysfunction, inner ear problems and neuralgias should be included with an elongated styloid process as sources of head and neck pain. 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.

Conflicts of interest

The author has none to declare.

REFERENCES

1. Eagle WW. Elongated styloid processes: report of two cases. *Arch Otolaryngol*. 1937;25:584–587.
2. Jain S, Bansal A, Paul S, Prashar DV. Styloid-stylohyoid syndrome. *Ann Maxillofac Surg*. 2012;2:66–69.
3. Correll RW, Jensen JL, Taylor JB, Rhyne RR. Mineralization of the stylohyoid-stylomandibular ligament complex. *Oral Surg Oral Med Oral Pathol*. 1979;48:286–291.
4. Langlais RP, Miles DA, Van Dis ML. Elongated and mineralized stylohyoid ligament complex: a proposed classification and report of a case of Eagle's syndrome. *Oral Surg Oral Med Oral Pathol*. 1986;61:527–532.

5. Steinman EP. Styloid syndrome in absence of an elongated process. *Acta Otolaryngol.* 1968;66:347–356.
6. Frommer J. Anatomic variations in the stylohyoid chain and their possible clinical significance. *Oral Surg.* 1974;38:659–667.
7. Bafaqeeh SA. Eagle syndrome: classic and carotid artery types. *J. Otolaryngol.* 2000;29:88–94.
8. Resnick D, Niwayama G. Philadelphia. *Diagnosis of Bone and Joint Disorders.* 3rd ed. Vol. 6. 1995:4577.

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