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Eagle's syndrome with type III segmented styloid process: A case report

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Abstract:

Eagle's syndrome is not an uncommon condition, but it is less known to Physicians where an elongated styloid process or calcified stylohyoid ligament compresses the adjacent anatomical structures leading to orofacial pain. Pain often gets relieved by surgical reduction of styloid process. Recently depending on the calcification it has been classified as three types. A case of Eagle's syndrome is reported here.

Keywords: Eagle's syndrome, styloid process, stylohyoid ligament, stylalgia.

Introduction:

In 1937, Eagle first described vague orofacial, and head and neck pain associated with styloid elongation and the condition came to be known as Eagle's syndrome (ES).[1] It is an elongated, conical projection of styloid process that lies anterior to mastoid process near the inferior surface of temporal bone at the junction of petrous and tympanic portions. Eagle defined the length of normal styloid process as 2.50 - 3 cm. An elongated styloid process occurs in about 4% of the general population, while only a small percentage (between 4 - 10.3%) of these patients are symptomatic.[2]

It manifests as pain in the parapharyngeal, retromandibular or cervical region. Among the other disturbances caused by this condition, pain remains the dominant symptom.[3] The clinical examination and the palpation of the elongated styloid process through the fossa tonsillaris is very helpful and specific. A particular face and neck pain can be specifically exacerbated by a forced neck flexion, extension and contralateral rotation in patients with Eagle's syndrome.[4]

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Case report:

A 35 year old male patient came with a complaint of pain in the left preauricular region since 1 year. Pain was of lancinating type, associated with headache, radiated to the neck and the temporal region and aggravated while turning the head. There was difficulty in swallowing and disturbance of sleep due to pain (insomnia). Patient took some self medications (analgesics) for pain relief. Patient gave a history of tonsillectomy 9 years back.

On extra oral examination, mouth opening was normal on opening mouth. On temperomandibular joint (TMJ) examination, deviation of mandible towards right side was seen. On palpation, there was tenderness and clicking sound heard in the left TMJ while opening mouth. Hypermobility of left and right condyles was appreciated. Based on clinical findings a provisional diagnosis of subluxation of TMJ and a differential diagnosis of anterior disc displacement with reduction was given. On radiologic examination, orthopantomograph (Fig 1), TMJ views (Fig 2), lateral cephalogram (Fig 3) showed elongated and segmented (type III) styloid process on both right & left sides. Based on the radiological findings, a final diagnosis of Eagle's syndrome was given. Patient was referred for surgical line of treatment.

Discussion:

The styloid process is derived from the second branchial arch - Reichert's cartilage.[5] Eagle's syndrome develops due to an elongation or deformation of the styloid process and "ossification" of the stylohyoid ligament.

The development of this pathology is influenced by cervical osteochondrosis, frequent tonsillitis, tonsillectomy and purulent facial and cervical inflammation have been reported. [6]

Females are affected more often than males. The normal length of the styloid process varies from person to person. Any process >2.5 cm may be considered to be elongated. Bilateral elongation of the styloid process is quite common. However, bilateral symptoms are less frequent.[7]

Langlais et al classified Elongated styloid process (ESP) as three types.[8]

Type I - Elongated

Type II - Pseudoarticulated

Type III -Segmented

The clinical symptoms associated with Eagle's syndrome include pharyngeal pain, otalgia and irritative sensation in the throat. Although Eagle's syndrome has been thought to be caused by an elongated styloid process or calcified stylohyoid ligament, the presence of an elongated styloid process is not usually a pathognomonic finding. Many patients may have elongated styloid process and may remain asymptomatic. The tip of the styloid process can be palpable in the tonsillar fossa as a hard bony spicule that aggravates symptoms with local tenderness.[7]

A variety of head and neck conditions should, however, be considered in the differential diagnosis of ES and cervicopharyngeal pain. These include temporomandibular disorders, glossopharyngeal neuralgia, trigeminal neuralgia, migraine- type headaches, sphenopalatine neuralgia, cervical arthritis, carotidynia, temporal arteritis, otitis media, salivary gland disease and possible tumours. Other pathology should be eliminated by a careful medical history, clinical and radiographic examination. A panoramic radiographic examination can show a correct picture of the elongated styloid process to confirm the diagnosis.[9]

Detailed case history and clinical examination should be conducted, along with radiographic examination, in order to rule out all other diseases which may mimick the Styloid process syndrome, for effective treatment of the patient.[3]

A pharmacological approach by transpharyngeal infiltration of steroids or anesthetics in the tonsillar fossa has been used, but styloidectomy is the treatment of choice. Styloidectomy can be performed by an intraoral or extraoral approach. Relief by injection of xylocaine over the tonsillar fossa is also a simple chairside diagnostic procedure. Medical treatment includes analgesics, anticonvulsants, antidepressants.[6]

The intraoral, retromolar, para-tonsillar approach is a good method to treat patient with a clinically and radiological approved Eagle's syndrome.[4]

Conclusion:

Possibility of Eagle's syndrome should always be considered while examining patients with vague neck pain. The diagnosis relies on history, palpation of the elongated styloid process in the tonsillar fossa, alertness of surgeon to diagnostic possibility and imaging.

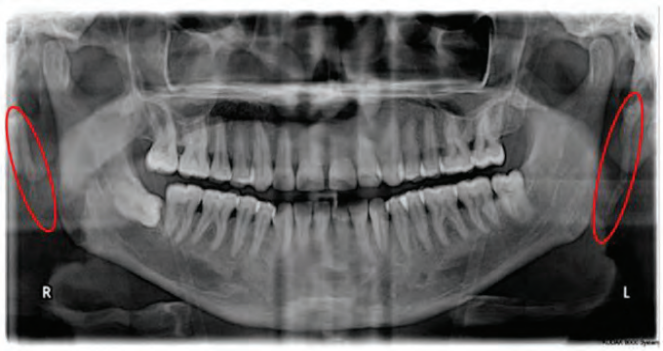

Fig 1: Orthopantomograph showing elongated and segmented (type III) styloid process on both right & left side.

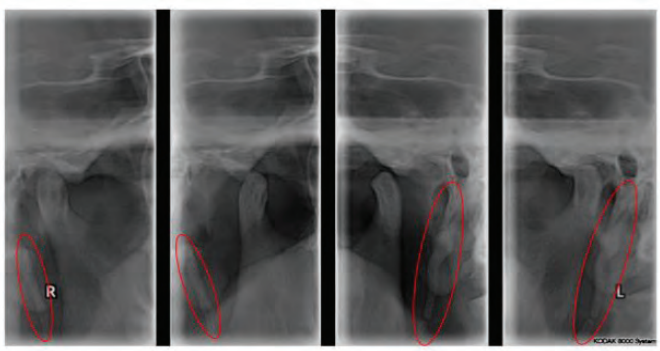

Fig 2: TMJ views showing elongated and segmented (type III) styloid process on both right & left sides during closed and open mouth.

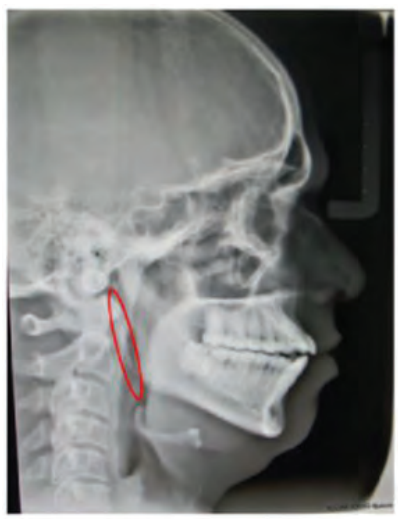

Fig 3: Lateral cephalogram showing elongated and segmented (type III) styloid process.

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