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Published Paper's Title Diagnosis and management of Eagle's Syndrome: A clinical review

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A Clinical review

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Diagnosis and management of Eagle's Syndrome: A clinical review

Nischal Gupta

Declaration

The Declaration of the author for publication of Research Paper in Asian Journal of Modern and Ayurvedic Medical Science (ISSN 2279-0772) I Nischal Gupta the author of the research paper entitled Diagnosis and management of Eagle's Syndrome:A clinical review declare that , I take the responsibility of the content and material of my paper as I myself have written it and also have read the manuscript of my paper carefully. Also, I hereby give my consent to publish our paper in ajmams , This research paper is my original work and no part of it or it's similar version is published or has been sent for publication anywhere else.I authorise the Editorial Board of the Journal to modify and edit the manuscript. I also give my consent to the publisher of ajmams to own the copyright of my research paper.

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ABSTRACT : Eagle's syndrome is a clinical entity with a wide range of clinical presentation. Although about 4% of population have an elongated styloid process, only few patients among these are clinically symptomatic. Diagnosis of eagle's syndrome is difficult to make because of its varied and vague symptoms, however it is absolutely clinical based upon diagnosis of exclusion and certain typical clinical signs.

In this article emphasis has been given to enlighten the characteristic clinical criteria for diagnosis of this rare entity and appropriate management options are discussed.

Key words:- Eagle's syndrome; Elongated styloid process.

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Introduction:

First described by an American otolaryngologist Watt, Weems Eagle in 1937 as stylalgia.He defined stylalgia as an autonomous entity related to enlarged styloid process or due to mineralization of the stylohyoid ligament complex.

Eagle described two syndromes -
1. Classic styloid syndrome

2. Stylocarotid syndrome

He correlated the first syndrome with post tonsillectomy, where there is localised pain in the tonsillar fossa; while in case of second syndrome there is persistent pain radiating along the course of carotid artery due to compression of internal and/or external carotid arteries and surrounding sympathetic nerves.

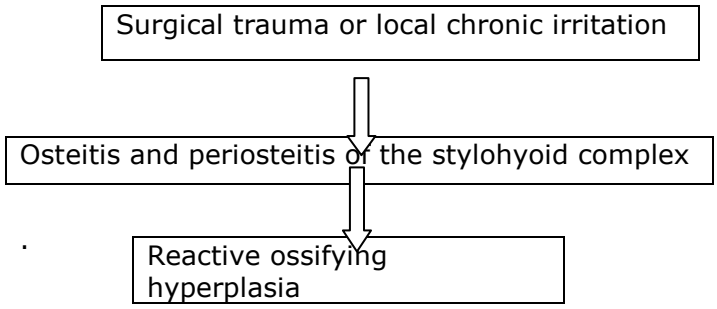
Incidence:

Although the incidence of Eagle Syndrome is varied among the general population, it is seen in about 4% of the population. And only in small % of cases among these groups is actually symptomatic. Usually is seen in adults (30-50 yrs), slightly more common in females.

Pathophysiology & Concerned anatomical structures:

Stylohyoid complex is made up of styloid process, stylohyoid ligament and smaller cornus of the hyoid bone. Styloid process lies anteriorly to the mastoid process of temporal bone between internal and external carotid artery and in lateral relation to the tonsillar fossa.

- Pathogenesis is still being debated.



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- Residues of Reichert's cartilage, during the development of the styloid process can cause osseous metaplasia.
- Anatomic anomaly of the styloid process could be genetically transmitted as a recessive autosomal character**.**

Thus either an enlarged/deformed styloid process or calcified stylohyoid complex can result in compression of adjoining neurovascular structures, particularly glossopharyngeal nerve and carotid arteries with its perivascular nerve fibers.

Clinical Features:

Patient may present with a wide variety of symptoms which include:

1.Recurrent throat pain
2.Foreign body sensation
3.Dysphagia
4.Otalgia (Burning sensation in and around ear)
5.Dysphasia
6.Facial pain and headache

Pain may vary from vague and ill defined or diffuse burning sensation to acute neuralgic type radiating to ear, and temporal region.

Differential diagnosis:

- Chronic pharyngitis/tonsillitis
- Eustachian tube dysfunction
- Otitis media
- Temporomandibular joint disorder
- Unerupted or impacted molar teeth
- Glossopharyngeal neuralgia

Diagnosis:

Diagnosis of eagle's syndrome is basically based on typical clinical symptoms and radiological studies

1. Clinical:-

- Palpation in the tonsillar fossa should reveal a bony formation and exacerbate pain aggravating symptoms with local tenderness.
- Local infiltration of lidocaine gives temporary relief of symptoms.

(Palpation of styloid process in tonsillar fossa is indicative of elongated styloid, because processes of normal length are normally not palpable.**)**

2. Radiological:-

Radiological Examination confirms the diagnosis.

- Lateral view radiographs of skull.
- An anteroposterior view radiograph.
- Orthopantomogram.
- Computed tomographic scan.

On radiological studies an elongated or malpositioned styloid process can be detected.
In reviewing these radiological investigations it should be noted that the normal length of styloid process is about 2 - 2.5cms and it is considered to be elongated when length exceeds more than 3cms.

Treatment:

- **Nonsurgical** :-
  - Reassurance
  - Nonsteroidal antiinflammatory drugs
  - Steroid injections
  - Antiepileptic preparations
- **Surgical :-**
  - Resection of styloid process.
    - Intraoral approach
    - Extraoral approach

Nonsurgical Treatment:

- One of the main component of Tt is the use of *glucocorticosteroid harmones*.

Hydrocortisone 25 mg (1 ml) diluted with 1 ml .25% of lidocaine or other local solution is injected close to styloid process.

- *Antiepileptic preparations* compose the second component of a complex conservative treatment.

400 mg of Carbamazepine per day initially; later dose is increased upto 600-800 mg / day, lasts for 2 to 3 weeks.

Surgical Treatment :

Styloidectomy (Treatment of choice)

1. Intraoral transpharyngeal approach
   (After doing tonsillectomy)
   - Restricted operative field
   - Risk of deep cervical infection
   - No external scar
2. Extraoral transcervical approach
   - Cutaneous scar
   - Risk of facial nerve injuries
   - Better visualization of surgical field
   - Decreased risk of deep space neck infection

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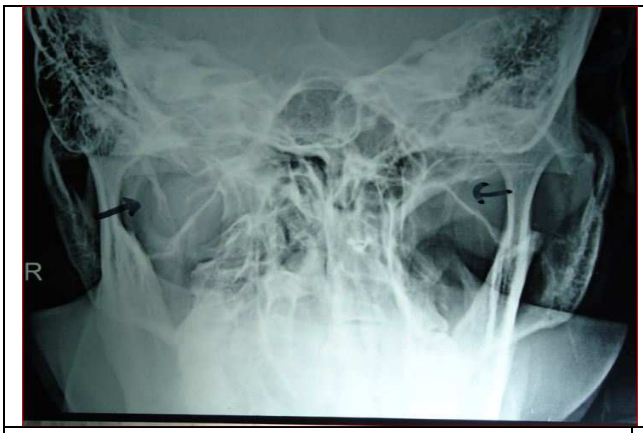
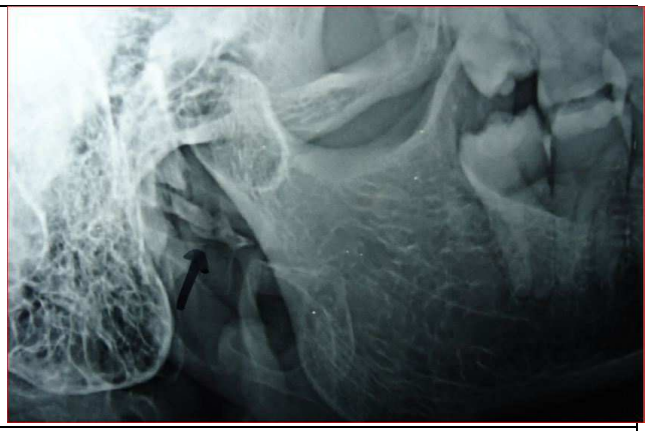
Fig-1:



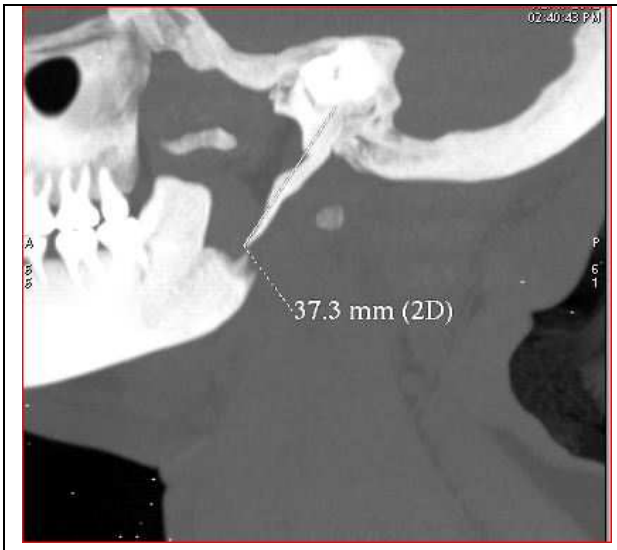
Anteroposterior view radiograph showing bilateral enlarged styloid process

Fig-2:



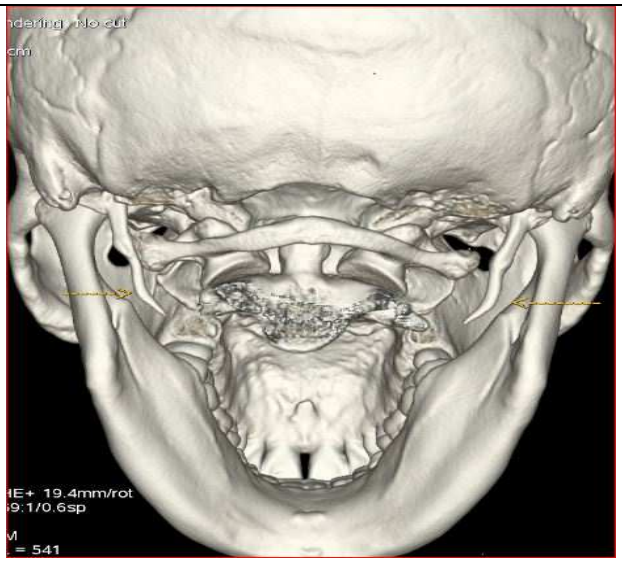
Lateral view radiograph showing enlarged styloid process.

Fig3:



CT scan saggital section showing enlarged styloid process.

Fig 4:



CT scan with 3d reconstruction showing bilateral elongated styloid process