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Eagle's Syndrome: Symptoms & Signs, Examination, Investigations & Treatment: A Case Report

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Abstract:- Eagle's syndrome is defined as secondary glossopharyngeal neuralgia due to elongated styloid process. In this case report, a 20-year-male who presented with a sore throat, pain over the neck on both sides & difficulty & pain during swallowing & foreign body sensation in the throat for past 3 years. After several consultations with different physicians, a diagnosis was accomplished by radiological investigation (multidetector computer tomography with multi-planar reconstructions and 3D volumetric reconstructions). Surgical styloidectomy was performed, with subsequent sudden remission of symptoms. Eagle's syndrome represents a commonly unrecognized entity, clinically characterized by non-specific cranio-facial pain. Differential diagnosis includes glossopharyngeal and trigeminal neuralgia, temporal arteritis, migraine, and cervical arthritis. Eagle's syndrome should always be kept in mind , mostly in adults when the symptoms like pain during swallowing & sore throat is present and not responding to analgesics. [1] & [2].

Keywords:- *Eagle's syndrome, Elongation of the styloid process.*

I. INTRODUCTION

In his classic description Eagle described two clinical features caused by elongated styloid process. They are 1.The classical stylohyoid syndrome.2.Stylocarotid syndrome. Classically the normal styloid process is about 1inch long.it is generally accepted as elongated if the length exceeds 4 cms. The clinical picture is composed of recurrent throat and neck pain, radiating into the ear and dysphagia. Symptoms can be bilateral or, more frequently, unilateral. The incidence is 4-8 per 10,000 people.

II. CASE REPORT

A 20yr male patient presented with sore throat, pain over the neck on both sides, difficulty and pain during swallowing & foreign body sensation in the throat for past 3yrs.

An initial dental evaluation done, and no abnormality detected relating to dental disorders. Then he was prescribed painkillers for which he got temporary relief. The patient described the pain as pricking type and not responding to pain killers. The pain is radiating to ears and lower neck, aggravated by opening mouth & chewing, relived temporarily by taking medications. After several consultations with different doctors (neurologist, orthopedic doctor, otolaryngologist) the patient had undergone thorough clinical examination and accurate radiologic investigation.

A. CLINICAL EXAMINATION:

- Oral Cavity examination: No abnormality detected.
- Oropharynx examination: B/L grade 2 tonsil enlargement present, not congested, symmetrical, crypts normal, membrane absent. Tonsillo-lingual sulcus normal. Soft palate normal and uvula in midline. Posterior pharyngeal wall normal.

B. ON PALPATION:

- On pressing anterior pillar no pus came out of tonsil.
- Palpation of bilateral tonsillar fossa – bony spicule feels palpation & tenderness present.
- Bilateral angle of mandible, infra-auricular region – no swelling & tenderness present.
- TMJ – no tenderness, mouth opening & closure normal.
- Examination of nose, ear & neck: no abnormality detected.

III. INVESTIGATIONS

Blood investigations: within normal limits.

A. Radiological investigations:

a) X RAY SKULL TOWNES VIEW

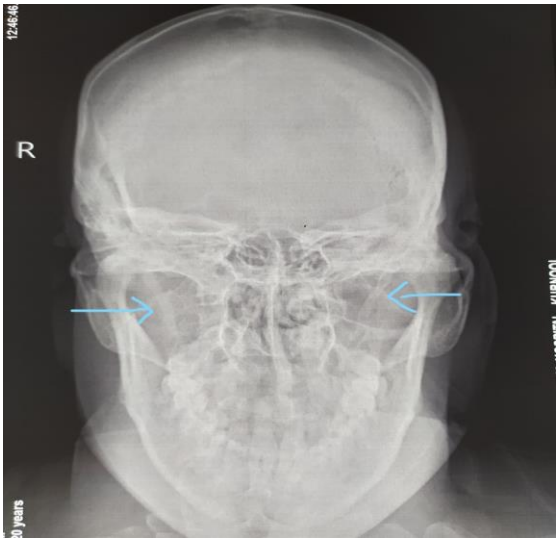

Fig. 1: X-Ray Townes View

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b) 3D CT FACE
- Normal length of styloid process- 2 to 3 cm.
- Right – 4 cm elongated styloid process
- Left – 3.5 cm elongated styloid process

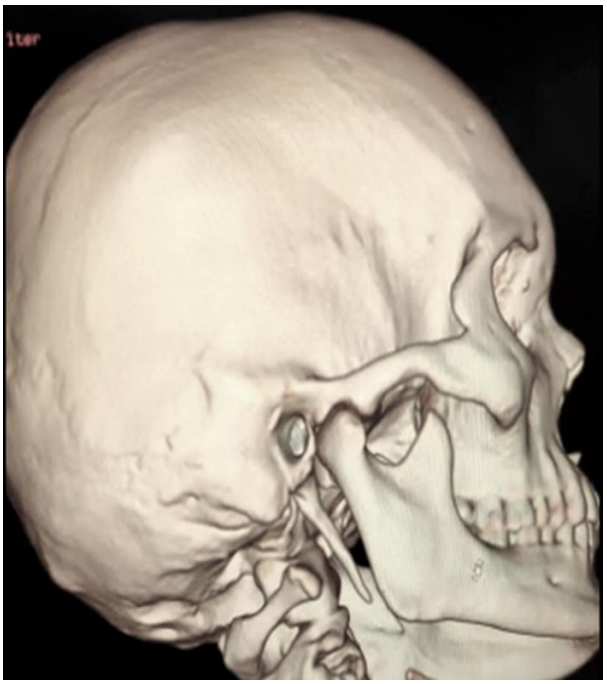

Fig. 2: 3D CT Face – Right Styloid Process

Fig. 3: 3D CT Face – Left Styloid Process

c) LANGLAIS ET ALL TYPES OF ELONGATED STYLOID PROCESS(ESP)
- Type 1- uninterrupted ESP
- Type2 – ESP with single pseudo-articulation
- Type 3- ESP with multiple pseudo articulations (segmented ossification of stylohyoid ligament)

Depending on the pattern of ossification
- Type A- calcified outline of ESP
- Type B- partially calcified
- Type C- nodular appearance
- Type D- complete ossification

Intraoral 2% lignocaine infiltration in tonsillar fossa relieved his symptoms

IV. TREATMENT

By intraoral tonsillar fossa approach styloidectomy was done.
- Under general anaesthesia patient kept in rose position and boyle's davis mouth gag inserted.

Fig. 4: Rose's Position with Boyle's David Mouth Gag

- On Left side tonsillectomy done and the tip of elongated styloid process was palpated. After stripping of all attachments, base is fixed using pituitary ring curette and nibbled off using a bone nibbler. The Stump was crushed [3].

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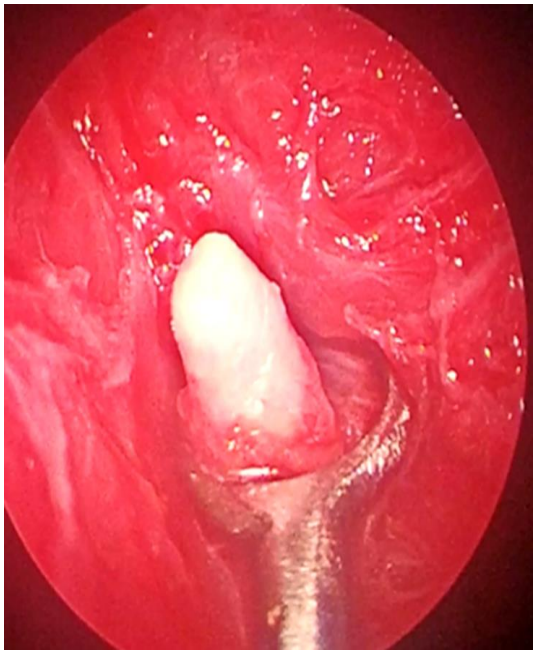

Fig. 5: Base of Styloid Process Fixed with Pituitary Ring Currette

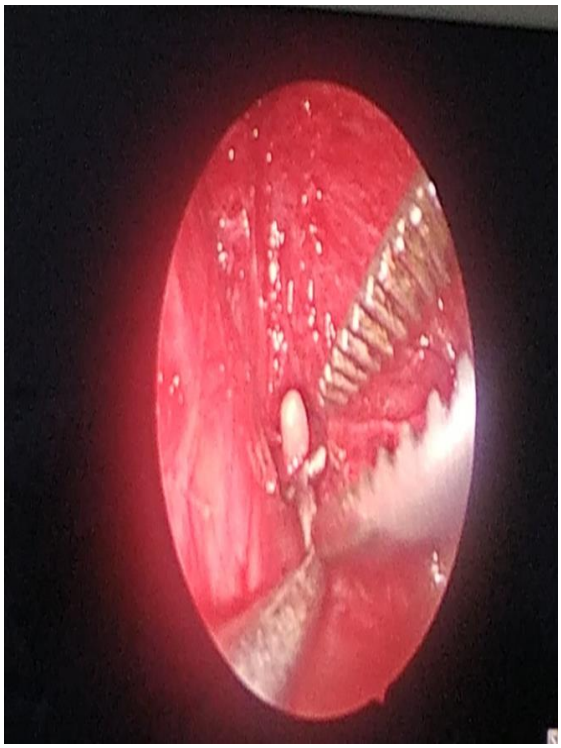

Fig. 6: Nibbling of Elongated Styloid Process with Bone Nibbler

- On right side, instead of doing tonsillectomy tonsil was retracted using mollison tonsil dissector . Styloid reduction done.

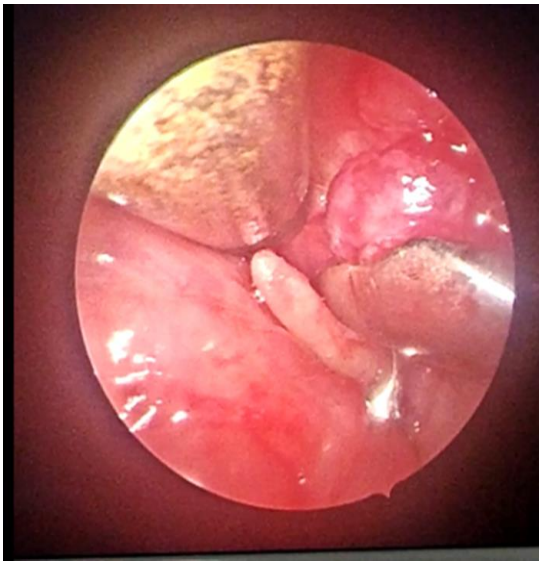

Fig. 7: Tonsil Retracted with Mollison Tonsil Dissector

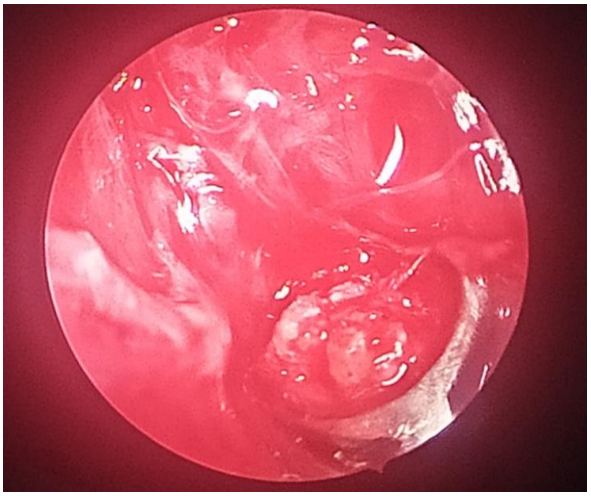

Fig. 8: Elongated Styloid Process Removed with Bone Nibbler

Patient discharged on postoperative day 4. patient was reviewed 1 week and 1 month after discharge. All his preoperative complaints were relieved.

V. DISCUSSION

Elongated styloid is in 4% of population ; among them only small proportion are presenting with clinical symptoms. Eagles syndrome is a complex disease with symptoms that includes dull ache pain in lateral pharyngeal wall, ipsilateral ear pain ,cervical pain. Depending on the direction of the elongated styloid process, presenting symptom varies. Two types of presentation namely classical stylohyoid syndrome or stylocarotid artery syndrome. It is a under diagnosed clinical entity.

Differential Diagnosis

- Glossopharyngeal neuralgia
- Tympanomandibular joint disorder
- Chronic pharyngo-tonsillitis
- Primary tumour of tonsil, para pharyngeal tumour
- Cervical osteoarthritis

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- Treatment is either conservative or surgical management. Conservative management includes anti-inflammatory medications , steroids or anaesthetic infiltration at the tonsillar fossa or lesser cornu of hyoid.
- Surgical management is either transcervical approach or intraoral approach. Intraoral tonsillar fossa approach with or without tonsillectomy is a safer method and time effective also.

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