Case Report
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Extraoral Sublingual Epidermoid Cyst: A Case Report

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Abstract

Epidermoid Cysts (EC) are rare cysts of the head and neck region, which may confuse with many soft tissue sublingual mass pathologies. A presentation of such cyst is important to decide the surgical approach. The aim of this paper was to present the role of USG and MRI for determine the surgical approach. A female patient presented with chronic asymptomatic swelling over left submandibular neck which was single diffuse, non-tender, soft, compressible, fluctuant with normal overlying skin. Swelling was not movable with deglutination and protrusion of tongue. MRI and USG guided FNAC was conclusive to diagnose the lesion. Histological examination confirmed the diagnosis. Lateral neck swelling should be considered as EC for differential diagnosis. A careful physical examination and fine needle aspiration and diagnostic imaging should be performed which clarifies the surgical approach.

Keywords: Epidermoid Cyst, Lateral Neck Swelling, Ultrasound, FNAC, MRI

1. Introduction

Epidermoid-Cysts (EC) are extremely rare developmental cysts of a benign nature, most predominantly found in the ovary and scrotal regions, with 7% are found in the head and neck. ECs are generally diagnosed between the ages of 15 and 50, occurring with the same frequency in males and females[1,2].

They can be classified as being located in a median or lateral position. Commonly EC manifests as slow growing masses in midline of neck which gradually increase due to the accumulation of cutaneous products. As of to firm, mobile swelling, with pinchable overlying skin and absence of movement with the protrusion of the tongue or on swallowing are common features[1]. ECs may become larger in size, with involvement of more than one anatomical structure and/or above the hyoid bone[3].

Surgical enucleation with extraoral surgical approach is recommended when EC is large in size with involvement of geniohyoid muscles, whereas smaller sublingual cysts are being treated intraorally[4].

2. Case Report

38 year old female patients presented with complain of mass over left submandibular neck region since 3 month. Swelling was gradually increased in size without any previous history of trauma or other systemic conditions. Extraoral examination revealed a single diffuse swelling of size approximately 3*3 cm is present with normal overlying skin. Swelling was not movable with deglutination and protrusion of tongue. On palpation swelling was non-tender, soft in consistency, compressible, fluctuant (Figure 1A).

Intra-oral examination revealed absence of any carious tooth, swelling, or pus discharge present (Figure 1B). Mandibular Occlusal and OPG had no significant findings. USG guided FNAC, showed 3*3.2 cm sized cystic lesion noted in left submandibular space, antero-medial to left submandibular gland and anterior to anterior belly of left digastric muscle noted, with possibility of soft tissue cyst (Figure 1C). MRI showed a well-defined encystal collection seen insinuating between gland and pterygoid

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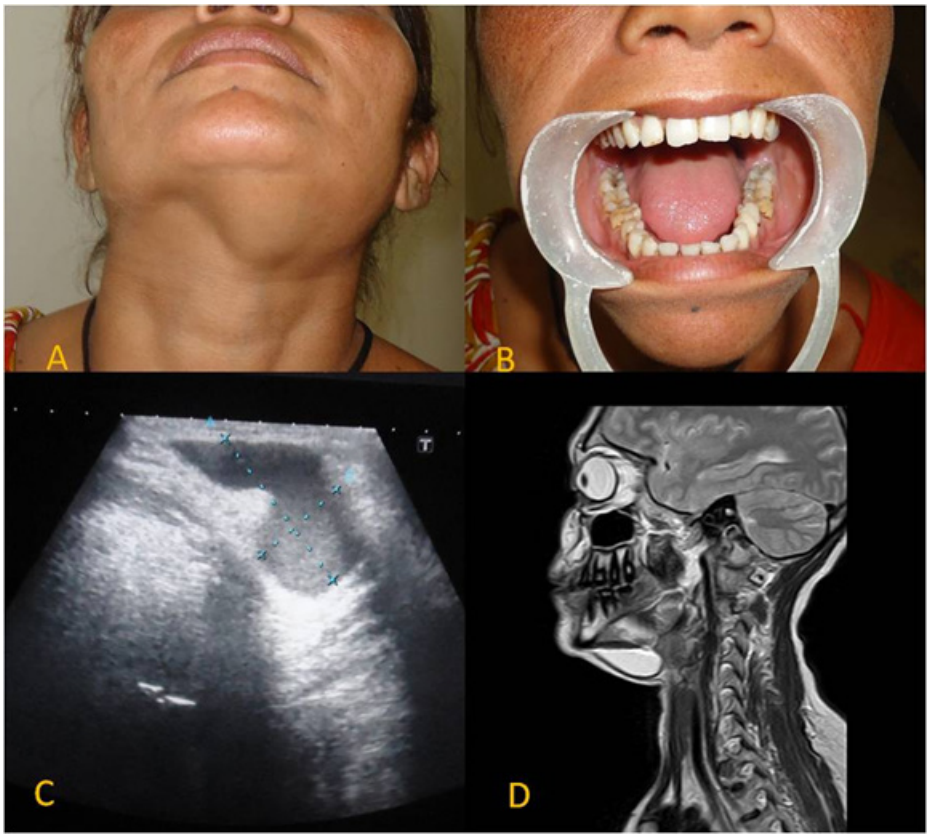


Figure 1. A - Swelling on left lateral neck region, B - insignificant intral oral findings, C - USG suggests hyperechoic cystic area at left submandibular space, antero-medial to left submandibular gland and anterior to anterior belly of left digastric muscle, and D - MRI showing a well-defined encystal collection at T2 weighted image.

muscles reaching up to the submandibular space below the angle of the mandible on left side (Figure 1D).

Under general anesthesia, the patient advised surgical excision of the lesion. Extraorally, a midline submental horizontal incision was made across the mucosa overlying the cyst and the lesion was dissected, but during the excision the cyst was ruptured (Figure 2A). The postoperative period was without any complication. Histopathological Section confirmed diagnosis (Figure 2B). The patient was reported with no recurrence after 6 months follow-up (Figure 2C).

3. Discussion

Soft tissue enlargements of submandibular area may be due to inflammation, developmental, cysts and neoplasms[2]. Review reported 6.94 percent of EC involving the head and neck region. EC are believed to be originated from the tuberculum impar of His or by inclusion of different tissue of 1st and 2nd branchial arches during the third and fourth weeks of intrauterine life[2,3]. Traumatic and thyroglossal anomaly theories have also been postulated for pathogenesis[2].

EC have been classified into supramylohyoid, infra mylohyoid and peri and trans mylohyoid[2,5,6]. Clinically, EC present as a slow-growing, painless, midline suprahyoid, neck mass (85-90%). They are mostly described to be asymptomatic until they are large enough to cause symptoms as dysphagia or dyspnoea, which can be due to infection, during pregnancy or in association with a sinus tract[2]. Our case was reported as large, chronic unaesthetic asymptomatic non inflammatory swelling which was more or less fluctuant without tongue displacement, thus classified as a infra mylohyoid type suggestive developmental etiology.

USG suggests well defined, thick walled cysts with echogenic debris interspersed with presence of posterior acoustic enhancement with "pseudosolid" appearance[2,4]. A hypointense T1 weighted images and hyperintense T2 weighted images on MRI may be gold standard, with

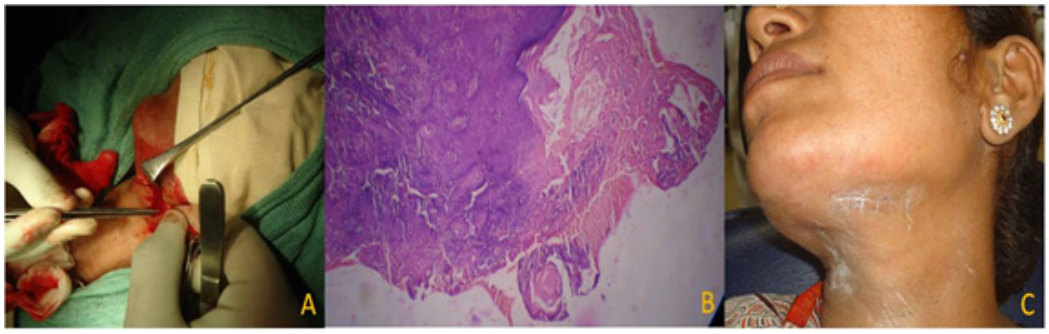


Figure 2. A - Surgical submental horizontal incision was approached, B - Histopathological Section showed epithelial lining with keratinisation without any identified adenexal structures and with occasional keratin flecks, and C - Postopertive follow up of 6 month.

multiple hypointense nodules internally can be seen[4]. STIR sequences are helpful to differentiate the lesion from lipomas[5]. It helps to diagnose its relationship between geniohyoid and mylohyoid muscles[7]. In our case MRI and USG guided FNAC was more conclusive.

Differential diagnosis includes plunging ranula, thyroglossal cyst, lipoma, infectious processes of perioral tissues or salivary glands, vascular malformation or lymphangioma and soft tissue tumors[2]. Treatment of the cysts is surgical via extraoral or intraoral approach depend on cyst level above and below mylohyoid muscle and size of lesion. Review claims that cystmore than 6cm in diameter and sublingually located cyst should be dissected extraorally, as we did[7]. There is a high chance of rupture of the cystic lesion, which may lead to aspiration of the cystic fluid[8]. In our case, cyst was ruptured at time of enucleation but no complication was reported.

Meyer described EC is lined by simple squamous epithelium without adnexal structures, as in our case. True EC additionally contains adnexal structures some times and, the teratoid cyst (complex cyst), may exhibit from simple squamous to ciliated epithelium, containing three germ layers: ectoderm, mesoderm and endoderm. Malignant transformation of has been reported along with a 5% of the teratoid variety of oral dermoid cyst cases[2].

4. Conclusion

Lateral neck swelling should be considered as EC for differential diagnosis. A careful physical examination, fine needle aspiration and diagnostic imaging should be performed which clarifies the surgical approach. Surgery is the only treatment with rare recurrence.

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6. Source of Funding

Nil

7. Conflicts of Interest/ Competing Interests

None

8. Availability of Data and Material

One can contact corresponding author mail.

9. Informed Consent

Informed consent was obtained from participant included in the study.

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