

TRICHILEMMAL CYST MASQUERADING AS THYROGLOSSAL CYST: A DIAGNOSTIC NONPLUS

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ABSTRACT

Trichilemmal cyst, also known as Pilar cyst, is a rare, slow growing, benign, adnexal skin tumour usually arising in scalp followed by other parts in head neck region. It contains keratin and its breakdown products.

We present a case of young male patient who presented with gradually progressive painless swelling in the neck anteriorly and clinicoradiologically masquerading as classical thyroglossal cyst. The mass was excised and the final histopathological report came out as Trichilemmal cyst, thus giving a diagnostic surprise.

Keywords: Trichilemmal cyst, Pilar cyst, Thyroglossal cyst

INTRODUCTION

Trichilemmal Cyst(TC) or Pilar cyst is a rare, slow growing, adnexal tumor, derived from the isthmus portion of the hair follicle, mainly affecting scalp of the elderly women. The term trichilemmal cyst was coined by Pinkus. He described that TC are due to their origin from the trichilemma or the exposed outer root sheath. The histologic hallmark of TC is, trichilemmal keratinization, the abrupt transition of a nucleated epithelial cell to an anucleate, keratinized cell without the

formation of agranular layer [1]. It contains keratin and its breakdown products and are lined by walls resembling the external root sheath of the hair. Since these arise from hair follicles, almost 90% cases occur in scalp and infrequently on face, neck and extremities. They are generally solitary, however rarely multiple TC have been reported [2].

We report an interesting case of young, male individual of TC, who presented with typical clinicoradiological findings consistent with thyroglossal cyst. However final histopathology report was of TC, which was a diagnostic surprise to us. To the best of our knowledge no case of TC has been reported ever masquerading as thyroglossal cyst.

CASE REPORT

18 year old male patient presented with complaints of progressive painless swelling in the anterior part of neck for last 4 years. Clinically, an approximately 4x3 cm size well defined, cystic swelling noted in anterior neck with slight predominance to left midline of neck just below the hyoid bone. Swelling was moving with deglutition and also on protrusion of tongue, clinically hinting towards thyroglossal cyst (Fig 1).

Fig 1: 4 x 3 cm cystic swelling located in anterior neck



Ultrasonography of neck showed a 39x32 mm size hyper echoic cyst lesion noted in the anterior part of neck at subhyoid level but no obvious tract seen around the tract. Thyroid gland present in its normal position. Findings were suggestive of thyroglossal duct cyst. FNAC was done which was also suggestive of thyroglossal duct cyst.

With a working diagnosis of thyroglossal duct cyst, patient underwent modified Sistrunk operation. Intra operative the superior end of the cyst appeared to be going posterior to hyoid bone. The cyst was excised in toto (Fig 2).



Fig 2: Excised specimen measuring 4x3 cm

Final histopathology report revealed cavity lined by stratified squamous epithelium without granular layer and abrupt trichilemmal type of keratinization in the cyst cavity. No evidence of malignancy seen. Final diagnosis given was trichilemmal cyst. (Fig 3a, 3b)



DISCUSSION

Trichilemmal cysts arise from the outer root sheath of hair follicles, mainly seen over scalp (approximately 90%) as smooth, round, intradermal swellings. It is more commonly found in females than males and often affects elderly. Almost two-thirds of patients have multiple lesions. The incidence of TC is 5-10% of population with no racial predilection [3]. These TCs may be sporadic or hereditary-familial with autosomal dominant transmission [4].

Some authors have proposed that trauma or inflammation may induce epithelial proliferation in TCs similar to that seen in pseudoepitheliomatous hyperplasia. However definitive etiology remains unknown [3]. In our case, an inflammatory stimulus secondary to trauma, such as shaving, might have stimulated the growth of the epithelial aggregates.

TCs are thought to be derived from the isthmus of a hair follicle, from outer root sheath as opposed to epithelium or hair follicle infundibulum. Trichilemmal cysts comprise approximately 20% of epithelial cysts; the other 80% are epidermoid. A TC is lined by stratified squamous epithelium, with no clearly visible intercellular bridges. The inner layer of the lining usually consists of pale, corrugated cells with no granular cell layer [5] [6]. There is no central punctum, however, have a thick cyst wall. All these differentiates it from most common differential diagnosis of sebaceous cyst [2].

TCs are generally benign, however, with very low potential for neoplastic transformation (2%) when foci of replicating cells result in a proliferating trichilemmal cyst (PTC). PTCs can also arise de novo. Although being generally benign lesions, they may grow quickly and aggressively, leading to ulcerations and, in rare instances, malignant transformation resulting in metastasis [5].

Rutty and colleagues examined DNA content of these lesions and found that TCs and benign PTCs

were diploid, while PTCs with either focal malignant change or overt carcinoma may exhibit aneuploidy and exhibit extensive cellular atypia and invasion of adjacent structures [7] [8].

The definitive treatment of TC is complete surgical excision with its sac. Incomplete cyst removal or remnant of cyst wall can lead to recurrence [9].

To reach a diagnosis apart of clinical examination, imaging in form of ultrasound and cross-sectional imaging can be done to exclude differentials, especially with midline head neck lesions. Fine needle aspiration cytology can also help in confirming diagnosis. However, in our case clinical, sonology and FNAC all mislead to a working diagnosis of Thyroglossal cyst. Intraop, the lesion was also found to abutting hyoid inferiorly and deep to strap muscle. This explain its movement with deglutition and also on tongue protrusion. Various differential diagnosis for anterior neck TC would be like dermoid cyst, sebaceous cyst, lipomas, inclusion cyst, thyroglossal cyst.

CONCLUSION

Trichilemmal cysts are intriguing lesions, generally develops in scalp region with neck being an atypical location. When it presents as anterior neck mass it can clinically camouflage as thyroglossal cyst. One should be aware that a TC may arise in such an atypical location. Complete surgical excision is the definitive treatment.

Conflict of Interests: We have no conflict of interests to declare

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