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An Unusual Case of Pre – Auricular Dermoid Cyst: A Case Report.

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ABSTRACT

Dermoid cyst is a nonodontogenic inclusion cysts lined by ectoderm. It arises as a result of entrapped ectodermal tissue of the first and second branchial arches, which fuse during the third and fourth weeks in utero or may be a variant of the thyroglossal duct cyst with ectodermal elements predominating. They appear as asymptomatic mass, slowly increasing in size and may occur anywhere on the body, most commonly on the face, scalp, neck, chest, and upper back. Here, we report an unusual case of dermoid cyst which was located in pre auricular region which was surgically removed.

Keywords: Cyst, Dermoid cyst, epidermoid cyst and pre – auricular region.

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INTRODUCTION

Epidermoid and dermoid cysts are nonodontogenic inclusion cysts lined by ectoderm [1]. Most clinicians and researchers believe that these are as a result of entrapped ectodermal tissue of the first and second branchial arches, which fuse during the third and fourth weeks in utero. A second theory suggests that midline dermoid and epidermoid cysts may be a variant of the thyroglossal duct cyst with ectodermal elements predominating [2]. These cysts constitute 1.6 to 6.9% of all cysts in the head and neck area [3]. In one study of 1495 cases almost half of such lesions were located in or around the orbit, 60% of which involved the outer third of the superior orbital margin forming external angular dermoids. Of the dermoids occurring in the head and neck, 12.5% were located in the nasal complex and involved the bridge of the nose in three quarters of instances, the tip, septum and base of the columella being less frequent sites. Dermoid cysts were also reported as occurring more rarely in occipital, frontal, labial, cervical and velar locations [4]. They appear as asymptomatic mass, slowly increasing in size and may occur anywhere on the body, most commonly on the face, scalp, neck, chest, and upper back [5]. Surgical excision is the most common treatment for such lesions. In the current report we describe an unusual case of dermoid cyst on the pre auricular region.

CASE REPORT

A 56 years old man was presented with a swelling on the right side of the face. On examination a well circumscribed oval shaped swelling was present on the right pre auricular region, measuring approximately 1X1 cm (fig 1&2). It was extending antero-posteriorly 3 mm from the right ear lobule and superio-inferiorly 1 cm from the right tragus of the ear. Growth was initially small and increased to the present size over the duration of 3 years. On palpation swelling was movable, soft in consistency and non-tender and all the inspectory findings were confirmed. The skin and mucosa over the swelling were intact and normal in colour. There was no evidence of facial nerve weakness and cervical lymphadenopathy. Medical history was noncontributory.

A provisional diagnosis of lipoma was made. Excisional biopsy was planned under local anaesthesia. Under strict aseptic condition crevicular incision was given around the mass. Incision was carried through skin and subcutaneous tissue. Blunt dissection was utilized to free the mass, which was removed intact. Wound was closed with 3-0 silk. The specimen was sent for histopathological examination.

The H&E stained section showed stratified squamous epithelial lining. The cyst wall composed of sebaceous glands, hair follicle, collagen fibers, adipose tissue with lumen filled with flakes of keratin, suggestive of Dermoid cyst.

DISCUSSION

Several theories have been proposed to explain the development of dermoid cysts. They may result from entrapment of ectodermal tissue of the first and second branchial arches during fetal development. They could represent a variant form of the thyroglossal duct cyst. Finally, previous surgical or accidental events could lead to traumatic implantation of epithelial cells into deeper tissues [5]. Most patients with these lesions ranged between the 2nd and 3rd decades of life. There is no predominant sex in the recent literature, regardless of some evidence which showed a male prevalence [6].

Dermoid cysts are histologically differentiated as epidermoid, dermoid and teratoid/ teratomata cyst [2]. There are no data on the incidence of the various forms; however, epidermoid cysts are said to be most common and teratoid cysts least common. Dermoid cysts have a wall of stratified squamous cornified epithelium and contain smegma and keratic scales as well as coetaneous appendages such as hair follicles, hairs, and sebaceous and sudoriparous glands. Epidermoid cysts have a wall of stratified squamous usually cornified epithelium and contain smegma and keratic scales without cutaneous appendages. Lastly, teratoid/teratomata cysts have a wall of stratified squamous epithelium with or without cornification and contain smegma and keratic scales as well as elements of the middle blastoderm such as vascular formations, elements of muscle and bone, dental tissues, or even whole teeth. The latter type is the only variety that may have a malignant transformation. Differential diagnosis includes infections, tumors and embryonic abnormalities [5].

Fine-needle aspiration is a safe, cost-effective and reliable tool for preoperative diagnosis of dermoid cysts. Magnetic resonance imaging (MRI) and computed tomography (CT) allow more precise localization of the lesion [6]. In this case, the presence of hair follicle, collagen fibers, adipose tissue made to the diagnosis of dermoid cyst and teratoma.

There are no specific rules for treating these lesions because they are mainly congenital. With the growth of dermal and epidermal cysts, patients usually complain of a weak pain in the area where the cyst is localized. They also experience certain bulbous motility disorders that can be transitory or permanent [7]. Treatment consists of complete removal of the cyst [1]. There is low recurrence rate, since fibrous capsule that surrounds the cyst makes it easy to enucleate in toto [8]. About 5% of dermoid cysts undergo malignant transformation, but only for the teratoid type [2].



Figure 1: A soft, painless swelling on the right pre auricular region (lateral view)



Figure 2: A soft, painless swelling on the right pre auricular region (anterior view)



Figure 3: Crevicular incision around the mass



Figure 4: Surgical excision of the cyst



Figure 5: Excised cyst



Figure 6: Wound closure



Figure 7: 7 days post-operative picture

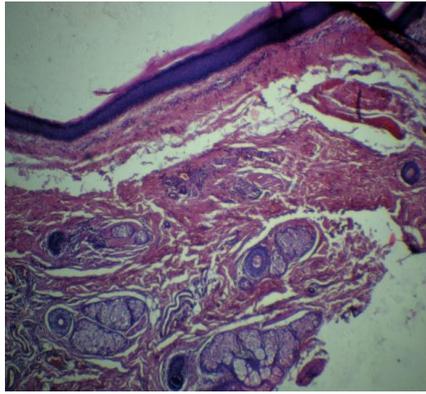


Figure 8: Abundant keratin in the cystic lumen, underlying connective tissue shows dermal appendages (10 X)

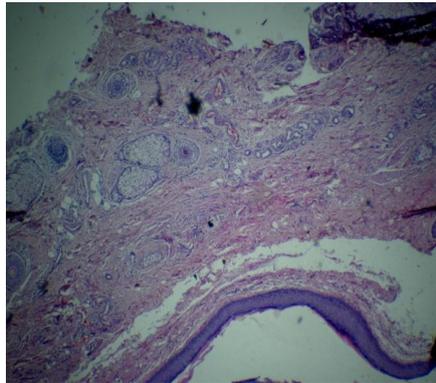


Figure 9: Abundant keratin in the cystic lumen, underlying connective tissue shows dermal appendages (4X)

CONCLUSION

In conclusion, we described a case of Dermoid cyst successfully diagnosed and treated with excision. Regular follow up over a period of 1 year failed to reveal any evidence of recurrence.

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