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Case Report

Solitary Eruptive Vellus Hair Cyst In An Adult- An Unusual Presentation: Case Report With A Brief Review Of Literature

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ABSTRACT

Eruptive vellus hair cysts are a type of cutaneous cysts of skin appendages usually seen in children and teenagers. We report a case of solitary eruptive vellus hair cyst on the thigh in a 38 year old lady which clinically mimicked sebaceous cyst. Diagnosis was confirmed on histopathology.

Key words: cutaneous cyst, infundibular, papule, vellus hair.

INTRODUCTION

Eruptive vellus hair cysts (EVHC) are a type of relatively uncommon cutaneous cysts of skin appendages. [1] Precise etiopathogenesis is yet to be established, although few possible mechanisms have been described in literature. These benign lesions usually present with multiple small asymptomatic papules. Nearly 25 percent of the cases have spontaneous resolution [2]

On histology, EVHCs are characteristically located in the mid dermis and contain variable amount of laminated keratin and multiple transversally and obliquely cut vellus hair [3] We report a case of EVHC in an adult female presenting unusually as solitary asymptomatic nodule on the right thigh. We also emphasize on the precise diagnosis of this relatively uncommon and frequently unrecognized lesion of vellus hair follicles.

CASE REPORT

A 38 year old female came to the Surgery outpatient department with nodule over the right thigh since 3 years. There was no associated pain, fever, redness or any other similar swelling or nodule in the body. She gives history of surgery at the same site around 8 years back, details for which are not available. Patient had been diagnosed with fibroadenoma in the left breast recently. There was no other significant family or personal history. On examination, a cystic nodule was identified on the right thigh measuring 1x 1cm. The cystic mass was excised and sent for histopathology with clinical suspicion of sebaceous cyst. Grossly, skin covered fibrous tissue measuring 2.5x2x1.8 cm was received. Cut section showed grey yellow areas. No cyst was identified. On microscopy, sections

showed epidermis overlying a cyst in the mid dermis lined by squamous epithelium with preserved granular layer (Figure 1). Cyst contains luminal lamellated keratinous material and multiple transversely and obliquely cut vellus hair (Figure 2). A diagnosis of Eruptive vellus hair cyst was given.

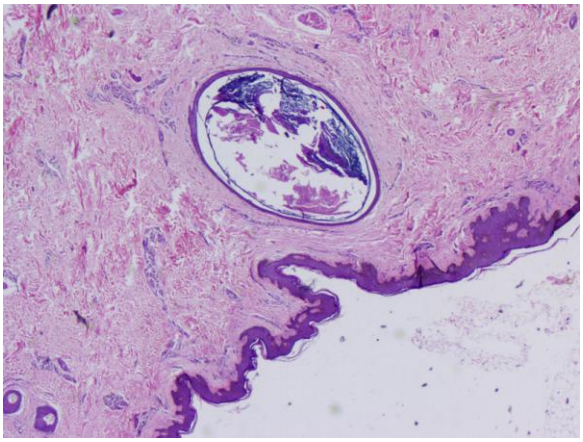

Figure 1- Epidermis overlying a cyst in the mid dermis lined by squamous epithelium
H&E X20

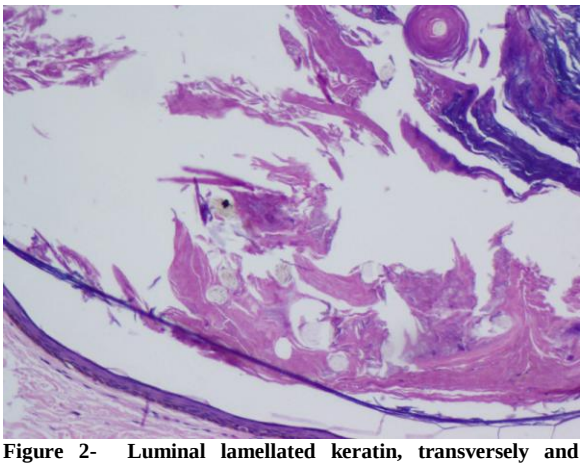

Figure 2- Luminal lamellated keratin, transversely and obliquely cut vellus hair H&E X 100

DISCUSSION

EVHCs were first described by Esterly et al in the year 1977. [4] They reported four pediatric cases with eruptions noted on the chest and extremities. Torchia et al [5] in their study have described nineteen families with EVHCs showing an autosomal dominant inheritance pattern. These cases reportedly had earlier age of onset. This is in concordance with Stiefler et al [6] report in the year 1980. Acquired and sporadic cases occur without any triggering factors and are occasionally associated with other genodermatoses. [7] They are usually seen in first two decades, however literature review documents occurrence of EVHC even in middle aged and old patient. [8-10] Mean age at diagnosis is 24 years with a slight female predominance (1.3: 1) [7]

The precise etiopathogenesis is not yet established. Possibilities of hamartoma differentiating toward vellus hair or a developmental abnormality of vellus hair follicles causing infundibular occlusion causing retention of hair, cystic dilatation of proximal part of the follicle and secondary atrophy of the hair bulbs are been suggested. [3] Acquired EVHC could also result from increased proliferation or differentiation of follicular keratinocytes; following any local or systemic stimulation [7] In our case it may be due to the previous surgery at the site for which details are not available.

These lesions are progressive, may not be always eruptive, contrary to their name. EVHCs commonly present as multiple, smooth, uniform small papules or nodules measuring 1-7 mm in diameter [7,11] Rarely, patients with a single lesion or with generalized involvement are also been described. [5] The lesions may be skin colored or hyperpigmented and may show central hyperkeratotic crust, punctum or umbilication. Although asymptomatic, few cases with itching and tenderness are been reported. Anterior chest, abdomen and extremities are commonly involved sites, however EVHCs have been noted to occur on face, neck, axillae, back buttocks, labium major and groin [7,11] On dermoscopy, this lesion has characteristic non–follicular blue homogeneous pigmentation. [1]

EVHC belong to the spectrum of hair follicle-related cysts. On microscopy,

EVHCs are characteristically located in the mid dermis and characterized as cyst wall lined by squamous epithelium with preserved granular layer. The lumen of the cyst has variable amount of laminated keratin and multiple transversally and obliquely cut vellus hair. Generally, no sebaceous glands are seen in the cyst wall. Occasionally, the cyst may be surrounded by granulomatous inflammatory response causing partial destruction of the cyst wall. [3,11] Zaharia et al[7] studied the immunohistochemical profile of this lesion and found cyst wall expressing antigens of the normal hair follicle infundibulum like keratins 1/10, calretinin and p63 along with reduced Ki-67 proliferation index.

The clinical differential diagnosis include infundibular, steatocystoma multiplex, comedones, epidermoid, trichilemmal and pigmented follicular cysts along with other skin lesions like perforating folliculitis, acneiform eruptions, syringoma, milia, molluscum contagiosum and adnexal tumors. [3,7] These can be differentiated and diagnosis can be established on microscopic examination.

Associations of EVHCs with eccrine poromas, sebaceous adenomas, anhidrotic ectodermal dysplasia, hidrotic ectodermal dysplasia, pachyonychia congenita have been reported. [12] Further studies are needed to establish the exact significance of these associations.

EVHC has a chronic course. About 25% of the cases resolve spontaneously, may be through transepidermal elimination of cyst contents. [2] Patients generally seek medical advice for cosmetic reasons. Treatment modalities include incision and drainage, needle evacuation, topical keratolytic agents and laser ablation. [3]

CONCLUSION

EVHCs are uncommon cutaneous cysts with characteristic histology. Usually seen as multiple papules on anterior chest, abdomen and extremities in the first two decades of life. This case of EVHC had unusual features like occurrence of solitary nodule in an adult female occurring on the thigh.

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