

A Chronically Itching Dusky Bump on Thigh- An Interesting CaseDr. Aarti B.Bhattacharya¹, Dr Prakriti Shukla²¹Professor, Department of Pathology, Hind Institute of Medical Sciences, Barabanki, Uttar Pradesh, India²Assistant Professor, Department of Pathology, Hind Institute of Medical Sciences, Barabanki, Uttar Pradesh, India***Corresponding author**

Dr Prakriti Shukla

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Abstract: Most cutaneous bumps are benign and are simply referred to as epidermoid cyst as they originate from the follicular infundibulum. These are usually seen in scalp, face, neck and trunk. Once the cyst ruptures, it can sometimes produce excessive melanin so as to give it a blackish-blue appearance grossly. We, herein, describe a rare case of extensive melanin incontinence in a ruptured epidermal inclusion cyst of thigh.

Keywords: Bump; Thigh; Epidermal cyst; Melanin

INTRODUCTION

Most cutaneous bumps are benign and are the commonest cystic lesions encountered in day to day dermatology clinics. These are simply referred to as epidermoid cyst or epidermal inclusion cyst. Most lesions originate from the follicular infundibulum, thus, the term epidermoid cysts is often favoured [1]. The term sebaceous cysts should be avoided in these lesions as they do not show sebaceous elements. Herein, we describe a rare case of ruptured epidermal inclusion cyst with extensive melanin incontinence.

CASE REPORT

We present a case of 22-year-old village girl who presented with a dome shaped bluish colored cutaneous cyst over left thigh near popliteal fossa for the past two years. It was associated with gradual increase in size and itching for the past four months.

There was no erythema, ulceration, or any complaint of pain. She sustained some injuries by a buffalo horn while working in a farm three years back. On examination a single, smooth, well defined, round, soft nodule of 3.5 cms size with a prominent punctum was seen. Systemic examination and family history were insignificant. With the clinical impression of sebaceous cyst, the nodule was excised and sent for histopathological examination. Gross examination revealed a greyish brown cyst measuring 3.5x2.8 cms in size with thick fibrous wall showing brown to black pigmented areas (Figure 1).

Microscopy showed a cyst partially lined by unremarkable stratified squamous epithelium with extensive ulceration (Figure 2). The cyst was filled with horny material arranged in laminated layers and cyst wall elicited diffuse infiltration by lymphocytes, histiocytes, polymorphs, numerous foreign body giant cells and keratin granulomas with cholesterol clefts. A peculiar finding in this case was dense collection of brown pigment both intra as well as extracellularly (Figure 3). Perl's prussian blue stain was negative for hemosiderin. Diagnosis of ruptured pigmented epidermal inclusion cyst was rendered.



Figure 1

Figure 1: Gross picture showing a grey brown cyst with thickened wall

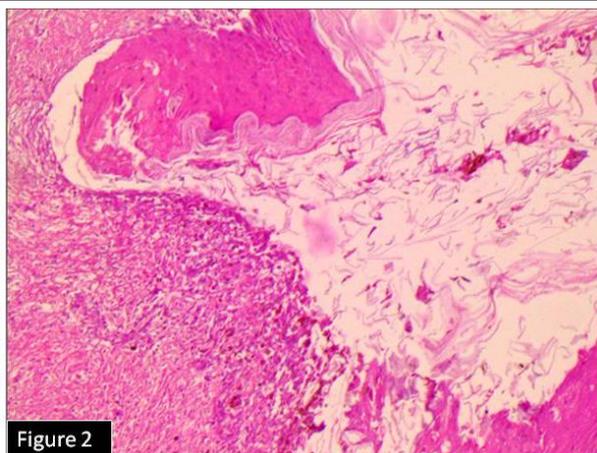


Figure 2

Figure 2: Epidermal inclusion cyst lined by cornified epithelium and filled with lamellated keratin (10X,H&E)

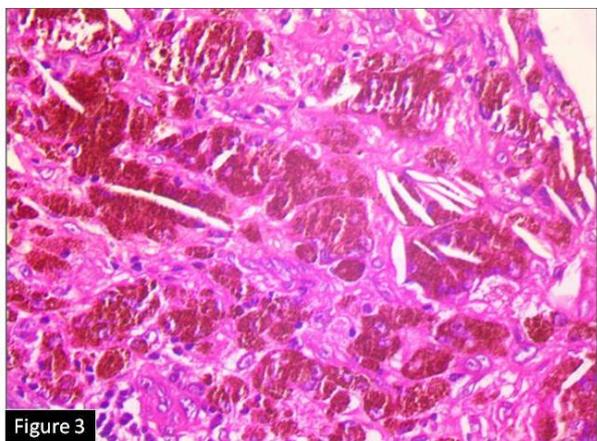


Figure 3

Figure 3: Keratin granuloma, cholesterol clefts and extensive melanin pigment in the cyst wall (40X, H&E)

DISCUSSION

Roser, in 1859 first described the term epidermoid cysts as a dome-shaped cyst that resides beneath the skin. These are slow growing keratinizing cysts arising from traumatic implantation of epithelial cells into the dermis [2]. However, other proposed mechanisms include proliferation of ectodermal remnant during embryogenesis or plugging of pilosebaceous units. Common sites of involvement are scalp, face, neck and trunk [3]. When an epidermal inclusion cyst ruptures, it elicits a striking inflammatory response in the form of keratin granuloma due to extrusion of keratinous contents of the cyst in the dermis. The occurrence of cholesterol clefts in a keratin granuloma suggests that cholesterol had been slowly isolated from the lipoproteins and the membrane components of the cornified cells included in the lipid-rich keratin [4]. It is assumed that chronic irritation leads to rupture of the cyst that may cause extensive incontinence of melanin pigment by the melanocytes [5].

Although handful of cases on melanin deposition in an epidermal inclusion cyst have been reported in the past but massive melanin pigmentation of the cyst lying close to the popliteal fossa is a rare event and it needs to be documented. The importance of recognizing this slowly progressive lesion with dense pigmentation is that it can be mistaken for any benign or malignant soft tissue lesion that can lead to mismanagement.

REFERENCES

1. Wygert KE, Parrish CA, Cashman RE, Lin R, Cockerell CJ. Melanoma in situ involving an epidermal inclusion (infundibular) cyst. *Am J Dermatopathol.* 2007; 29(6): 564-65.
2. Abhishek V, Arpit S, Jyoti D, Abhijit R. An unusual case of epidermal inclusion cyst of maxilla. *Int J Head Neck Surg* 2010; 1:43-47.
3. Handa U, Kumar S, Mohan H. Aspiration cytology of epidermoid cyst of terminal phalanx. *Diagn Cytopathol.* 2002; 26(4):266-67.
4. Okamura K, Konno T, Kawaguchi M, Abe Y, Yaguchi Y, Ajima S, Hozumi Y, Suzuki T. Cholesterol crystal deposition in basal cell carcinoma: an investigation of 4 cases. *Journal of Cosmetics, Dermatological Sciences and Applications.* 2015 Aug 4;5(03):176.
5. Chhabra K, Kaur A, Kaur J, Kaur G, Ramesh K, Harpal S. Pigmented epidermal cyst - A rare case report. *Ann. Int. Med. Den. Res.* 2017;3(2):01- 03.