Single Glistening Cystic Swelling on the Anterior Thigh

A 54-year-old female presented with a single, gradually enlarging mass over the anterior thigh for last 12 months. On examination, there was a $2 \times 2$ cm smooth dome-shaped, translucent cystic swelling with a bluish hue, over the anterior aspect of left thigh. It was non-compressible and non-tender without any signs of inflammation. [Figure 1] It was not associated with any loss of sensation or any pain on movement of the limb. The regional lymph nodes were not palpable. The routine investigations were within normal limits. The X-ray did not reveal any involvement of underlying bone. Patient denied any significant medical history.

The cystic swelling was excised with a narrow margin and was sent for histopathology. Histopathology revealed multiple cystic structures lined by multiple layers of apocrine cells with abundant eosinophilic cytoplasm and basally placed nucleus. Decapitation secretions were seen. Solid papillary projections were seen protruding into the cyst cavity. [Figure 2a-d] No features of atypia were seen. After complete excision patient recovered well without any recurrence on 1 year follow-up.

What is your diagnosis:

Apocrine Cystadenoma

Discussion

Apocrine cystadenoma (AC) is classically described as an adenomatous cystic proliferation of apocrine glands.\[1] It is a benign proliferation of secretory part of the gland and is commonly seen among the older age groups, as a single swelling, commonly in head and neck, particularly periocular region. Other reported sites include axillae, anogenital and periareolar area.\[1] We present a case of apocrine cystadenoma, presenting over the thigh which is a rare occurrence.

AC presents as a well-defined, dome shaped intradermal cystic swelling of size $3-15$ mm, with overlying smooth, shiny skin. The lesions may appear translucent, pearly or with shades of blue-black.\[1] The color of the cysts correspond to Tyndall effect of the lipofuscin-rich non-melanin, non-hemosiderin secretory granules in the cyst.\[2]

Classical histopathological features of apocrine cystadenoma include unilocular or multilocular cystic spaces lined by thick proliferating secretory apocrine epithelium giving a pinched off appearance of the secretions into the lumen and a bilayered pseudocapsule. The lumen of the cavity may contain amorphous eosinophilic material (acid mucopolysaccharide). The outer layer consists of flat elongated myoepithelial cells and tall columnar cells with round-oval nuclei at the base form the inner layer of the cyst.\[3] The surrounding of the cyst is lined by a well-organized fibrous tissue.

A common differential of apocrine cystadenoma includes eccrine hidrocystoma, which represents the retention cyst of eccrine ducts in dermis. Clinically, it presents in periorbital region and can be differentiated histopathologically by presence of unilocular cyst lined by double layer of cuboidal epithelium and no decapitation of cells in the lumen. It also has a seasonal variation with aggravation in hot humid climate. It shows multiple microvilli on the luminal side and stain positively with S100 protein.\[4] Other differentials include basal cell epithelioma, ganglion cysts, sebaceous cysts and inclusion cysts, which can be differentiated clinically and histopathologically.\[5]

Histopathologic differentials include syringocystadenoma papilliferum which

---

Ishan Agrawal, Bhabani STP Singh, Bikash Ranjan Kar

Department of Dermatology, IMS and SUM Hospital, 'O' Anusundhan University, Bhubaneswar, Odisha, India

Address for correspondence:
Dr. Bhabani STP Singh,
Department of Dermatology,
IMS and SUM Hospital,
SOA University,
Bhubaneswar - 751 003,
Odisha, India.
E-mail: drbstp@gmail.com

Access this article online

Website: www.idoj.in

DOI: 10.4103/idoj.idoj_468_21

Quick Response Code:

How to cite this article: Agrawal I, Singh BS, Kar BR. Single glistening cystic swelling on the anterior thigh. Indian Dermatol Online J 2022;13:812-3.

Received: 19-Jul-2021. Revised: 08-Nov-2021. Accepted: 18-Nov-2021. Published: 18-Jul-2022.
show papillary projections lined by secretory apocrine epithelium. However, the latter does not manifest as a cystic swelling and can be differentiated clinically. Another differential is apocrine hidrocystoma which represents a purely cystic lesion with no proliferating papillary projections into the cyst cavity.

If left untreated, apocrine cystadenoma grows gradually with no spontaneous resolution. Available treatments include marginal excision, which is both diagnostic and therapeutic.

Other treatment options include electrodessication, radiofrequency ablation and aspiration followed by trichloroacetic acid injection.

**Declaration of patient consent**

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

**Financial support and sponsorship**

Nil.

**Conflicts of interest**

There are no conflicts of interest.

**References**

1. Charles NC, Patel P, Belinsky I, Oami S. Apocrine cystadenoma of the eyelid: A rare palpebral neoplasm. Report of 2 cases. Ophthalmic Plast Reconstr Surg 2018;34:e67-9.
2. Mitsuishi T, Nogita T, Kawashima M. Apocrine cystadenoma arising on the ear. J Dermatol 1996;23:583-4.
3. Sugiyama A, Sugiura M, Piris A, Tomita Y, Mihm MC. Apocrine cystadenoma and apocrine hidrocystoma: Examination of 21 cases with emphasis on nomenclature according to proliferative features. J Cutan Pathol 2007;34:912-7.
4. Al Hawsawi KA, Assaedi LM, Gefri A, Bukhari R. Apocrine hidrocystomas: An unusual case presentation and review of literature. J Dermatol Dermatol Surg 2019;23:52-4.
5. Smith JD, Chernosky ME. Apocrine hidrocystoma (cystadennoma). Arch Dermatol 1974;109:700-2.