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Case Report

Poroid Hidradenoma: A Rare Eccrine Tumor in an Unusual Location

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Abstract: Poroid hidradenoma (PH) is a rare benign neoplasm of eccrine origin, typically located within the dermis. It most commonly affects individuals in the sixth and seventh decades of life, though it can present at any age. The head, neck, and trunk are typical locations. This case report details a 26-year-old male with a large PH on the right hip, an atypical location. The lesion began as a small, painful nodule and progressively grew over 18 months. Initial treatment, suspected to be for an abscess, was unsuccessful. A dermatological evaluation revealed a 7 x 8 cm exophytic, ulcerated mass, and biopsy confirmed the diagnosis of PH. Histopathological analysis showed solid and cystic components, with poroid cells identified. Immunohistochemistry was positive for markers such as CEA, CK-7, and p63, which are consistent with this tumor type. Following the confirmed diagnosis, complete surgical excision was performed, and the patient remains asymptomatic with no signs of recurrence. Poroid hidradenoma is characterized by both poroid and cuticular cells, and although it is generally benign, malignant transformation has been reported in less than 1% of cases. Therefore, complete excision is recommended to reduce the risk of recurrence and malignancy. This case highlights the importance of early diagnosis and appropriate management of PH, including long-term follow-up to ensure the absence of recurrence.

Keywords: Poroid Hidradenoma, Eccrine tumor, Benign, neoplasm, atypical.

INTRODUCTION

Poroid hidradenoma (PH) is a benign neoplasm of the skin appendages that originates in the eccrine glands, specifically in the excretory duct. It is a tumor located in the dermis without extension to the epidermis [1, 2].

The highest incidence of this pathology occurs between the sixth and seventh decades of life, although cases have been documented in individuals of all ages. Typical locations include the head and neck, followed by the trunk and extremities [3, 4]. We present the case of a male patient in his third decade of life with a large poroid hidradenoma in an unusual location.

CLINICAL CASE

A 26-year-old male from the State of Mexico, with no history of chronic-degenerative diseases, presented with a painful, erythematous tumor measuring approximately 0.5 x 0.5 cm, located in the right hip region, 18 months prior to evaluation. Over the first year, the lesion progressively increased in size, prompting medical consultation.

Suspected of being an abscess, a surgical incision was performed; however, the lesion remained ulcerated thereafter.

The patient was referred to the Dermatology Department of our institution, where physical examination revealed a dermatosis localized to the posterolateral region of the right hip, characterized by an oval, exophytic neoformation measuring 7 x 8 cm, ulcerated, with granulation tissue and serohemorrhagic exudate (Figure 1).

An incisional biopsy was performed, with differential diagnoses including cutaneous metastasis of unknown primary origin and squamous cell carcinoma.

Histopathological analysis revealed multiple dermal nodules with solid and cystic components. The solid component was composed of numerous basophilic poroid cells with round or oval nuclei (Figures 2, 3, and 4). Immunohistochemistry was positive for CEA, CK-20, CK-7, CK-19, p40, and p63 (Figure 5), findings consistent with the morphology and immunophenotype of poroid hidradenoma.

Following the confirmed diagnosis, the lesion was completely excised. The patient remains asymptomatic and shows no signs of recurrence.

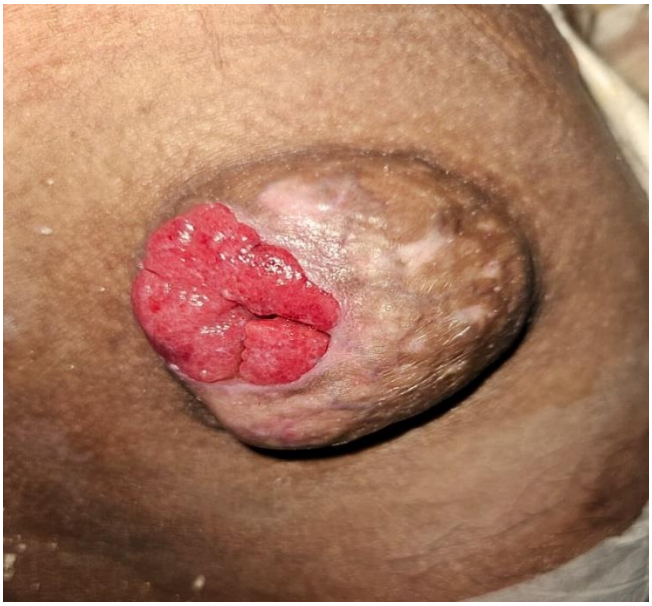

Figure 1: Oval-shaped exophytic neoformation measuring 7 x 8 cm, ulcerated with granulation tissue and serohemorrhagic discharge

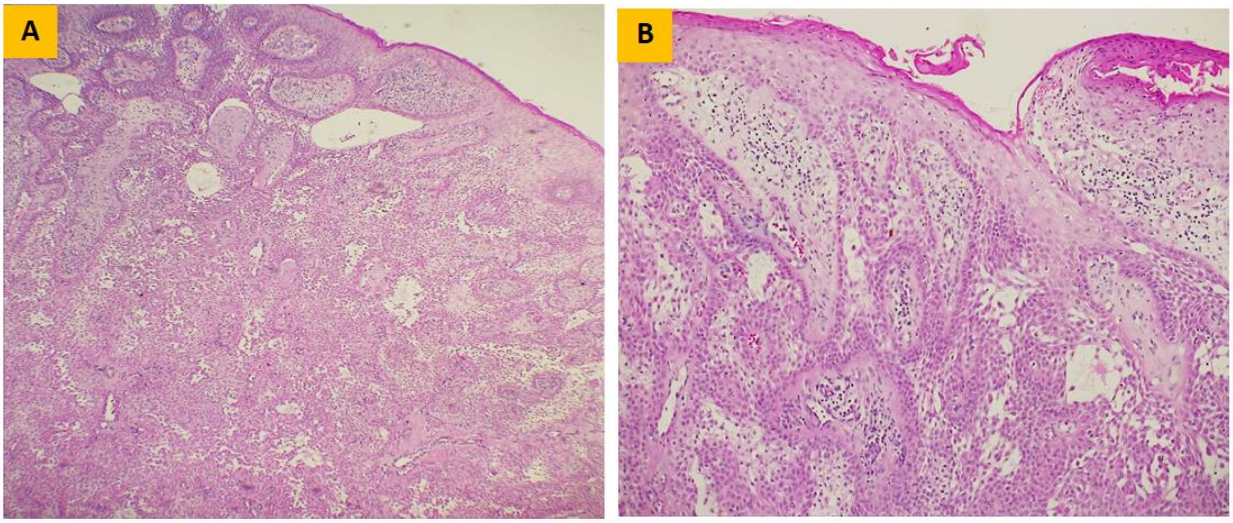

Figure 2: A) H&E 4x. Overview. Histological section of the skin, showing nests extending into the superficial and deep dermis; B) 10x. Compact parakeratosis is observed in the stratum corneum. The spinous layer exhibits irregular acanthosis, and in the basal layer, epithelioid-like cells are present, forming nests, some of which coalesce and extend into the intermediate and deep dermis

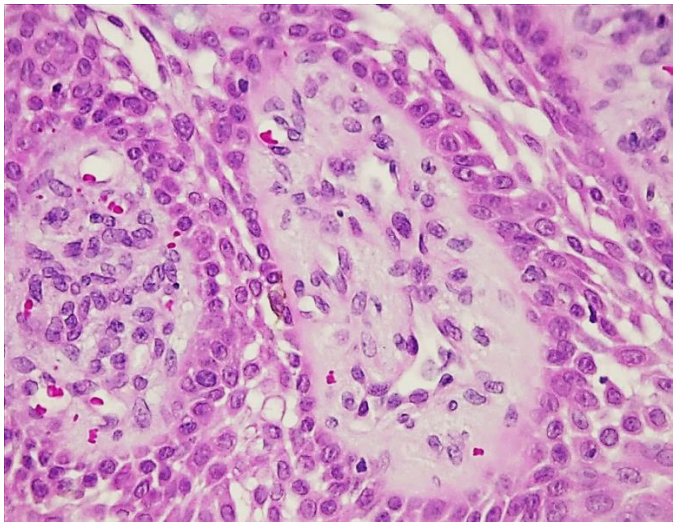

Figure 3: H&E 40x. Discohesive cuboidal cells with scant pink cytoplasm and a nucleus-to-cytoplasm ratio favoring the nucleus (poroid cells), also attached to fibrovascular stalks

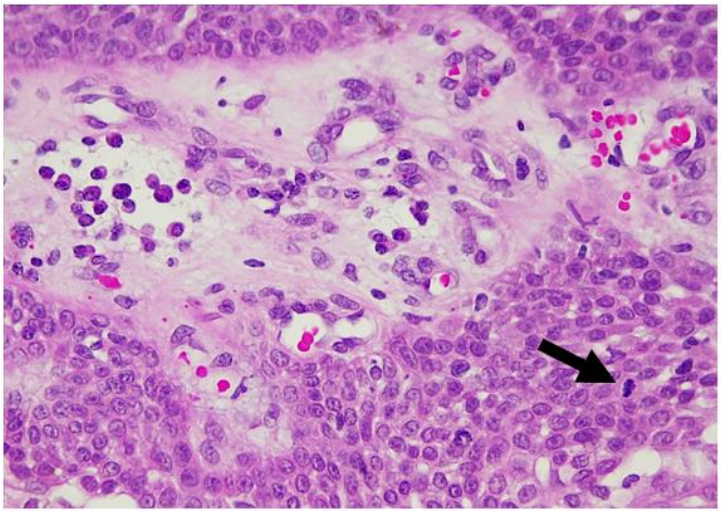

Figure 4: Plasma cell infiltration in a vascularized hyaline stroma. Isolated typical mitotic figure (arrow)

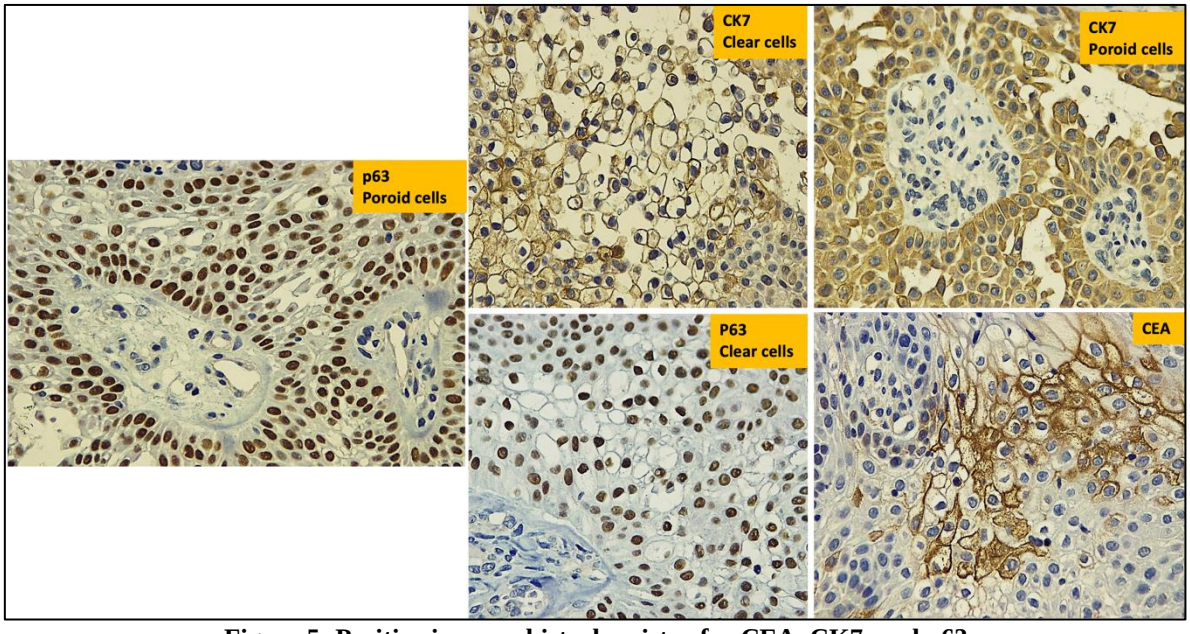

Figure 5: Positive immunohistochemistry for CEA, CK7, and p63

DISCUSSION

Poroid hidradenoma is a rare, benign intradermal neoplasm of eccrine origin [5-7]. It is characterized by combining the structural components of hidradenomas, with both solid and cystic areas, as well as cytological features typical of poromas, such as the presence of poroid and cuticular cells [8] and ductal differentiation [4]. This entity was first described by Abenoza and Ackerman in 1990 [2, 9], and it accounts for less than 5% of all hidradenomas [10].

Clinically, poroid hidradenoma presents as a reddish or bluish papule that progresses to a nodule measuring between 1 and 2 cm in diameter, although cases larger than 6 cm have been reported [11]. Its usual location is on the head and neck [12]. The peak incidence occurs in the sixth decade of life [11], with no gender predilection [10].

Dermoscopy reveals central areas with a blue-gray hue can be identified, surrounded peripherally by a polymorphous vascular pattern that includes arborizing, glomerular, and hairpin vessels, which are encircled by whitish halos [11].

Histopathologically, poroid hidradenomas exhibit both solid and cystic areas, with two types of cells: poroid and cuticular [2, 13, 14]. Poroid cells are cuboidal, uniform, small, with an oval to round nucleus. Cuticular cells have abundant eosinophilic cytoplasm and a larger nucleus, which occasionally shows multinucleation [2]. Like other poromas, poroid hidradenoma frequently presents areas of mass necrosis [14].

Immunohistochemically, epithelial markers such as EMA and cytokeratins are useful, as they are associated with cells of the dermal sweat ducts. EMA is helpful in differentiating the eccrine component, and occasionally CEA can be positive as a sensitive marker for cutaneous adnexal tumors[2]. Differential diagnoses should include other poroma variants, hidroacanthoma simplex, dermal duct tumor, fibromas, fibrolipomas, dermatofibromas, hemangiomas, pyogenic granulomas, and cutaneous metastases [3, 15].

Although these tumors are typically benign, the recommended treatment is complete surgical excision [1, 6], due to the potential risk of malignant transformation, which, although rare, has been reported in less than 1% of cases [3,4,11,12].

CONCLUSION

Poroid hidradenoma is a benign neoplasm of eccrine origin, typically occurring in the sixth and seventh decades of life but can present at any age and in atypical locations. Accurate diagnosis relies on histopathology and immunohistochemistry to differentiate it from other lesions. Despite its benign nature, complete surgical excision is recommended to prevent recurrence and reduce the rare risk of malignant transformation. This case highlights the importance of timely diagnosis, proper management, and follow-up to ensure no recurrence.

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