Eccrine Poroma with an Atypical Clinical Presentation Mimicking Breast Cancer

*Hossain T,[1] Islam MN,[2] Talukder SI,[3] Mostafa MG[4]

Poromas are benign adnexal neoplasms of either eccrine or apocrine differentiation. Poromas usually present as small solitary tumours on acral sites. Larger lesions and occurrence on other parts of the body are uncommon clinically and difficult to diagnose without histology. There are a few reports of poroma arising on the breast. We report a case of eccrine poroma located to the areola of an eighty years old woman presenting as a breast lump that clinically resembled a carcinoma. The aspiration cytology failed to make a definite diagnosis. The histopathology demonstrated apparent continuity of a benign poroma with the epidermis.

[Dinajpur Med Col J 2015 Jan; 8 (1):103-105]

Key words: Eccrine poroma, adnexal neoplasm, breast lump, carcinoma

Introduction

A poroma is a benign adnexal neoplasm. Poromas can be of either eccrine or apocrine lineage.[1] Eccrine poroma is a benign adnexal tumor composed of a lobular growth of cuboidal monomorphic cells that show ductal differentiation. They arise from the intraepidermal portion of eccrine duct and extend into the dermis while maintaining a connection to the epidermis. Eccrine poroma originally was described in 1956.[2] Typically, it presents as a soft, sessile, reddish papule or nodule. Initially, it was thought to occur most often on hairless acral skin, particularly the soles or sides of the feet.[3] More recent studies have documented a wider distribution to include the scalp, face, chest, abdomen and extremities.[4] Onset typically is in adulthood and there is no sex or ethnic predilection. The size of poromas have been reported to range from a few millimeters to as large as 5 cm.[4]

There are only a few reports of poroma arising on the breast. We report an unsuspected case of a breast lump in an 80-year old female diagnosed as eccrine poroma.

1. *Dr. Taslima Hossain, Junior Consultant, Pathology, 50 Bedded Hospital, Tongi, Gazipur. taslimahossain.luna@gmail.com
2. Dr. Md. Nowfel Islam, Professor & Head, Department of Pathology, National Institute of Neurosciences, Dhaka.
3. Dr. Sadequel Islam Talukder, Assistant Professor, Department of Pathology, Dinajpur Medical College, Dinajpur
4. Dr. Mohammad Golam Mostafa, Professor & Head, Department of Histopathology, National Institute of Cancer Research & Hospital.

*For correspondence

Case Report

An 80-year old female presented with the complaints of breast lump of one year duration. The lump was gradually increasing in size. On examination, a slightly tender relatively well circumscribed mass was palpated in the areolar region measuring about 6.0×4.5×3.0 cm. The overlying skin was ulcerated. Lymph nodes were palpable in the axilla. Fine Needle Aspirate (FNA) of the lump revealed sheets of round to oval cells having scanty cytoplasm and prominent nucleoli. Since there was a high degree of suspicion considering the age of the patient and size of the mass, a lumpectomy was done to rule out malignancy. Grossly, the specimen was a single partially skin covered globular tissue measuring about 16x12x4 cm. The cut sections revealed a solid grey brown mass measuring 8x6 cm (Figure 1). Axillary content revealed two lymph nodes, the larger one was 0.8 cm in maximum diameter. Formalin fixed paraffin embedded routine hematoxylin and eosin stained sections revealed lobules and nests of oval cells having scanty basophilic cytoplasm with uniform nuclei that were broadly connected to the epidermis (Figure 2). There were numerous duct like structures and absence of mitosis (Figure 3). The lymph nodes revealed features of nonspecific lymphadenitis. The histological features clinched the diagnosis of an eccrine poroma.

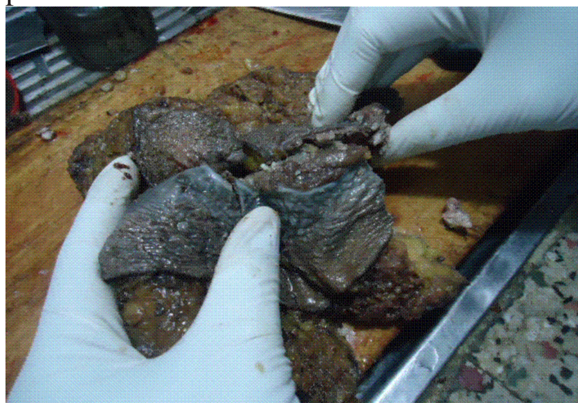

Figure 1. An ulcerated grey brown mass involving the areolar region of breast.

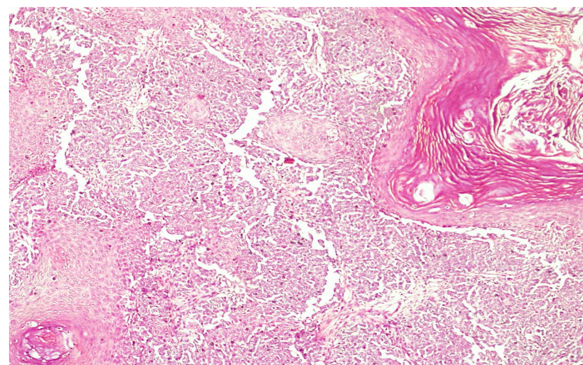

Figure 2. Lobular proliferation of monomorphous epithelial cells that were broadly connected to the epidermis

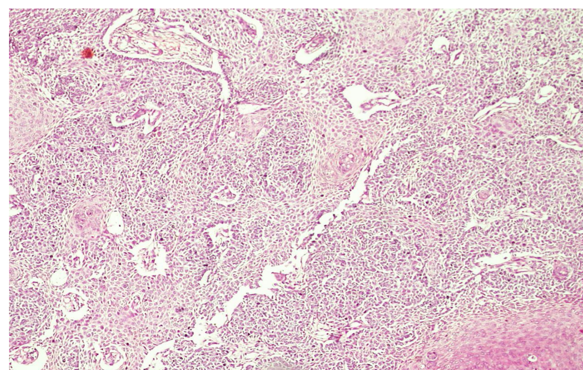

Figure 3. Numerous duct like structures were formed by the tumour cells.

Discussion

Eccrine poroma was first described by Goldman et al. in 1956.[2] The term 'poroma' refers to a group of benign adnexal neoplasms with 'poroid' or terminal ductal differentiation.[5] Clinically, poromas usually present as solitary papules, plaques, or nodules usually on the palms and soles or the sides of the foot. Poromas may also appear on hands and fingers, neck, chest, nose and eyelid. Most of the tumours generally arise in middle-aged persons. Eccrine poromas are slow growing tumours that may present as small pink papules, large verrucous plaques or exophytic nodules.[6]

Eccrine poroma arises within the lower portion of the epidermis and extends downward into the dermis. The tumor cells

are uniformly cuboidal with a round basophilic nucleus and are connected by intercellular bridges. The border between the tumor and the stroma is well defined. The tumor cells contain significant amount of glycogen which is associated with cytoplasmic clearing.[6] Most eccrine poromas show ductal lumina and occasional cystic spaces within the tumor bands which are lined by an eosinophilic, periodic acid-schiff (PAS)-positive, diastase-resistant cuticle.[5]
Eccrine poromas may be situated entirely within the epidermis where the tumor cells form discrete aggregates. These intraepidermal poromas are described as 'hidroacanthoma simplex'. When eccrine poromas are located within the dermis, they consist of tumor islands of various shapes with ductal lumina; these are described as 'dermal duct tumors'. Enzyme histochemical staining shows prevalence of eccrine enzymes such as phosphorylase and succinate dehydrogenase. Eccrine poroma must be differentiated from basal cell carcinoma and seborrheic keratosis. Great variability in presentation explains the difficulties clinicians can face in the differential diagnosis.[6] Occasionally, poromas may be of divergent adnexal differentiation in which case, IHC may have to be performed.[7]

Conclusion

Eccrine poroma is an unusual tumour of breast to diagnose. Our case of a large eccrine poroma arising on breast skin demonstrates that eccrine poromas should be considered in the clinical differential of lesions on the areola, suggesting an underlying breast tumour.

References

1. Harvell JD, Kerschmann RL, LeBoit PE. Eccrine or apocrine poroma? Six poromas with divergent adnexal differentiation. Am J Dermatopathol. Feb 1996; 18(1):1-9.
2. Goldman P, Pinkus H, Rogin JR. Eccrine poroma; tumors exhibiting features of the Epidermal sweat duct unit. AMA Arch Derm. 1956; 74: 511-521.
3. Brenn T, McKee PH. Tumors of the sweat glands. In: McKee PH, Calonje E, Granter SR. Pathology of the Skin. Vol 2. 3rd ed. Philadelphia, PA: Elsevier Limited; 2005:1589-1661.
4. Abenoza P, Ackerman AB. Neoplasms with eccrine differentiation. In: Ackerman AB, ed. Ackerman's Histologic Diagnosis of Neoplastic Skin Diseases, a Method by Pattern Analysis. Vol 1. Philadelphia, PA: Lea & Febiger; 1990:113-185.
5. McCalmont TH. Adnexal neoplasms. Bolognia JL, Jorizzo JL, Rapini RP, et al. editors. Dermatology. 2nd ed. Mosby: Elsevier; 2008. p. 1704-5.
6. Ahmed TSS, Priore JD, Seykora JT. Tumours of the Epidermal Appendages. Elder DE, Rosalie E, Johnson BL, editors. Lever's Histopathology of the Skin. 10th ed. Wolters Kluwer: Lippincott Williams and Wilkins; 2005. p. 885-8.
7. Forman SB, McMullan FH, Azmi FH. Eccrine poroma: One tumor, many faces. J Cutan Pathol 2005; 32:87-8.