

FINE NEEDLE ASPIRATION OF ECCRINE SPIRADENOMA: A CASE REPORT

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ABSTRACT

Eccrine spiradenoma is an uncommon benign tumor of sweat glands. The clinical presentation in majority of cases is as solitary painful dermal nodule less than 5 cm in diameter, with equal incidence in both sexes. The nodule develops most usually on head, neck and dorsal aspect of the trunk and is many times recurrent. Malignant transformation is rare. Differential diagnosis includes other sweat gland tumours, sebaceous cysts and various benign subcutaneous connective tissue disorders. Exact diagnosis and radical surgical excision can avoid recurrence. We here report a case of eccrine spiradenoma, clinically diagnosed as cervical lymphadenitis and stress the importance of role of fine needle aspiration cytology in its diagnosis along with documentation of the cytological diagnostic criteria of the same.

KEYWORDS: Adnexal tumor, Cytology, Eccrine spiradenoma

INTRODUCTION

Eccrine spiradenoma are rare benign adnexal tumors, first studied and described by Kersting and Helving in 1956. ^[1] They arise from intradermal part of the ducts of eccrine sweat glands. ^[2] Histopathological criteria for diagnosis of skin adnexal tumor are well established and documented in literature. However, not enough documentation is available for cytological diagnostic criteria of the same. Also multiple lines of differentiation of various adnexal tumours and their complicated nomenclature make the accurate cytological diagnosis of adnexal tumors very challenging.

We are reporting a case of Eccrine Spiradenoma diagnosed on Fine needle aspiration cytology (FNAC) and later on confirmed on histopathology.

CASE REPORT

A young male patient presented to the Medicine outpatient department with complaints of slow growing swelling in the posterior triangle of neck for duration of more than a year. On examination the swelling measured 2 x 1 cm, firm, nodular, tender, freely mobile with overlying normal skin. Clinician suspected the swelling to be a painful cervical lymph node and referred the patient to Pathology Department for Fine Needle Aspiration of the same.

Fine Needle Aspiration was done with 22G needle attached with 20cc disposable plastic syringe using Franzens Handle. Aspiration was blood mixed. Air dried smears were stained with May-Grunwald-Geimsa (MGG) stains and alcohol fixed smears were stained with Papanicolaou (PAP) stain respectively.

Microscopy of the smears show good cellularity comprising of cohesive multilayered

sheets and clusters of uniform sized round to oval epithelial cells, which were monomorphic and having scant amount of cytoplasm, round to oval basophilic nuclei and inconspicuous nucleoli. Some of the cells were arranged around a central Globule of amorphous material.

The other two cell types such as intermediate sized myoepithelial cells which had small round to oval nuclei with regular contours and scant cytoplasm and the small lymphocyte like cells with round dark nuclei and scant cytoplasm pre-dominated the smears.

At places cells were arranged in tubules and acinar formation. The second population of myoepithelial cells was spindle to oval with hyperchromatic nuclei having regular nuclear contours and scant cytoplasm. These two populations of cells could be differentiated more easily on pap stained smears (Fig 2). Some of the cells were arranged around a central globule of amorphous material.

The case was reported as benign adnexal tumor possibly of eccrine origin and excision of the swelling was advised for exact categorization. The nodule was excised under the effect of local anesthesia in minor OT, fixed in 10% aqueous formalin and sent for histo-pathological examination.

On gross examination the nodule was 2 x 1 cm, well circumscribed, firm in nature. The specimen was bisected and embedded. After routine processing, the sections were cut, collected to glass slide precoated with egg albumin and stained with Haematoxylin and Eosin stain, mounted with DPX, covered with cover slip and subjected to microscopy.

Microscopic examination shows three sharply demarcated lobules separated by hyalinized stroma. Each lobule comprised of tightly packed basaloid cells with hyalinised stroma and numerous blood vessels. The cells were arranged in cords,

sheets and trabeculae. Microscopic examination under high power shows two cell populations comprising of small dark cells with hyper chromatic nuclei and large cells with pale and moderate cytoplasm and vesicular nuclei. Mature lymphocytes were seen scattered in the stroma (Fig 1).

Histopathology confirmed the diagnosis of Eccrine spiradenoma. Patient remained healthy post operatively.

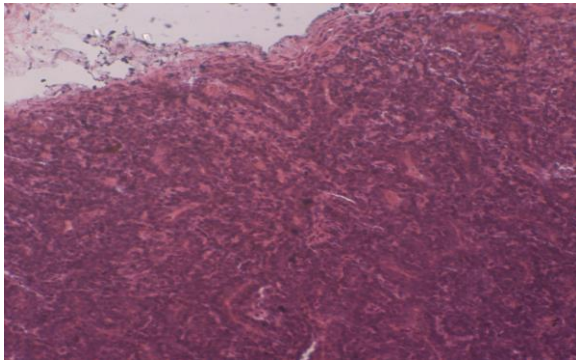


Fig 1: Sections showing lobular tumor in dermis composed of tightly packed basaloid cells arranged in cords, sheets & nests in a case of eccrine spiradenoma (H & E, ×200)

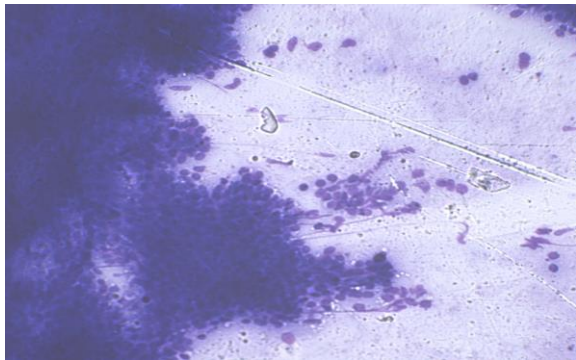


Fig 2: FNA smears showing cohesive multilayered clusters of round to oval epithelial cells with few scattered myoepithelial cells and mature lymphocytes (MGG, × 200)

DISCUSSION

Eccrine sweat glands are skin appendages which develop as early as the fourth gestational month from the germ cells in the basal layer of epidermis. They are composed of three segments – Intra epidermal duct or acrosyrngium, intradermal duct and secretory coil lying in the lower half of the dermis or subcutaneous fat. [3] Tumors can arise from any of the three segments of the eccrine glands. [4,5] Eccrine tumors have a pre-dilection for head and neck region, palms and soles, extremities and ventral surface of the body. They are solitary or multiple, sessile or pedunculated, cutaneous, dermal or subcutaneous. [4-6]

Eccrine spiradenoma is a rare skin adnexal

tumor described by Sutton in 1934 & extensively described by Kersting et al in 1956. [7,8] Most of the times it presents as a solitary, painful, firm, freely mobile nodule attached to the overlying skin. Though histopathology of eccrine spiradenoma is well documented and established, such lesions are rarely encountered on FNA and hence the cytological diagnostic criteria are rarely reported in the literature. The cyto-diagnosis of other cutaneous adnexal tumor is still a challenge because of enormous number of such tumors and their variant forms.

The cytology of the Eccrine Tumors has been described by Varsa et al [9] and Kim [10]. The cytology findings in our case were similar to the cytology criteria described in their study. Clinically, the eccrine tumors resemble other lesions like basal cell carcinoma, cutaneous leiomyoma, neurofibroma, malignant melanoma, subcutaneous metastasis from an internal malignancy, seborrheic keratosis, granuloma pyogenicum, and cutaneous endometriosis. [4-6] Identification of the three types of cell on cytology are of paramount importance to differentiate it from adenoid cystic carcinoma, glomus tumor and other eccrine adnexal tumors (hidradenoma, cylindroma, chondroid syringoma) and spiradenocarcinoma. [11] Kolda et al. described a case of eccrine spiradenoma mimicking adenoid cystic carcinoma in cytology. [8] Cytology of adenoid cystic carcinoma contains a single type of cells and hyaline globules in contrast to epithelial-myoeptithelial-lymphocytic cells in eccrine spiradenomas. [8] Vidyavathi reported a case of glomus tumor of forearm, cytologically misinterpreted as eccrine spiradenoma. [12] Uniformity of epithelial looking cells, presence of basement membrane like material and overlooking endothelial cells in a painful lesion were the causes of misdiagnosis. [12] Care should be taken on the presence of endothelial cells, lack of three types of cells in cytology smears, lack of tight multilayered clusters in glomus tumor to distinguish from eccrine spiradenoma. Cytology of hidradenoma composed of cohesive clusters of polygonal cells with moderate clear to pale eosinophilic cytoplasm. Nuclei are oval with smooth nuclear outline and distinct nucleoli. [13] On cytological evaluation of cylindroma, smears show palisaded arrangement of small basaloid cells along with few light staining cells and hyaline globules. [13] Cytologically chondroid syringoma is synonymous to the pleomorphic salivary adenoma, which comprises of two types of cells (epithelial and myoepithelial) with a chondro-myxoid ground substances. All the three benign adnexal tumors lack lymphocytes in the cytological smears. Distinction from its malignant counterpart is possible, which shows of cellular atypia, open chromatin in nucleus, conspicuous nucleoli. Other features of malignancy such as mitosis and cellular pleomorphism are also absent in

eccrine spiradenomas. [11]

CONCLUSION

We here report cytomorphological diagnostic features of eccrine spiradenoma confirmed on histopathology. Though there is paucity of documentation of cytomorphological features of skin appendage AL tumor, Fine needle aspiration can be used as a simple diagnostic investigation for eccrine skin adnexal tumor.

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