



Case Report:

Chondroid Syringoma and Eccrine Spiradenoma

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Abstract: Fine needle aspiration cytology (FNAC) is a well established diagnostic tool. However, most clinicians prefer to diagnose suspected skin tumors by excisional biopsy as they are easily accessible and hence benign skin adnexal tumors are rarely encountered on FNAC. There are only a very few case reports describing the fine needle aspiration cytologic features of chondroid syringoma and eccrine spiradenoma for diagnosis.

Cases: First case was a 20 year old female who presented with firm, non-tender swelling in the left little finger measuring 1 cm in diameter. Smears showed clusters of round to plasmacytoid cells with moderate to abundant cytoplasm embedded in a chondromyxoid ground substance. Hence, a diagnosis of chondroid syringoma was made. Another case was a 40 year old lady who presented with a painful swelling on the anterior chest wall measuring approximately 0.8 cms in diameter. Smears were moderately cellular with cohesive sheets and clusters of bland cells of three different cell types. Hence, a probable diagnosis of eccrine spiradenoma was made and both the cases were confirmed histologically. **Conclusion:** Appropriate knowledge of the cytologic features of chondroid syringoma and eccrine spiradenoma helps in providing a definitive diagnosis and correct management of the patient.

Key Words: Chondroid syringoma; Eccrine spiradenoma; Cytology

Introduction:

Tumors of the epidermal appendages are classified according to their differentiation towards hair follicle, sebaceous glands, apocrine glands and eccrine glands.^{1,2} They are further divided into different groups based on the degree of differentiation. We report here two cases, both tumors of eccrine gland differentiation. In both the cases, the diagnosis was made initially on fine needle aspiration cytology and confirmed subsequently by histology.

Chondroid syringoma is a rare benign skin adnexal tumor of eccrine/ apocrine origin, affecting commonly the head and neck region although it may occur occasionally in other parts of the body. Considering that the malignant form of this tumor has been reported predominantly in the extremities, this tumor must be kept in mind among masses occurring in the fingers. Eccrine spiradenoma is also an uncommon benign cutaneous adnexal tumor arising in eccrine sweat glands that was first described by Sutton in 1934 and extensively described by Kersting et al in 1956.^{2,3} Although histologic features of this tumor have been

well characterized, the cytologic features on FNAC have been described only twice before. Hence, here we report a case of eccrine spiradenoma occurring in the anterior chest wall.

Methods:

Fine needle aspiration cytology (FNAC) was performed using 23 G needle with a 5 ml disposable plastic syringe. The wet smears were fixed in 95% alcohol and processed for Papanicolaou stain. The air dried smears were subjected for May-Grunwald-Giemsa stain. Following excision of the lesion, the tissue was processed routinely and Hematoxylin-Eosin stained sections were studied.

Case Reports:

Chondroid syringoma: A 20 year old female presented to surgical out patient department with one year history of a painless, progressively enlarging swelling in the region of middle phalanx of little finger. On examination, it was firm, non tender and measured approximately 1 cm in diameter. Overlying skin was normal and the swelling was fixed to the skin and freely mobile over the underlying structure. X-ray showed a homogenous soft tissue opacity. Underlying bone was unremarkable. A clinical differential diagnosis of dermoid cyst/ganglion was made and the case was subjected to FNAC. Thick mucoid material was aspirated.

Cytomorphology: The smears on microscopy showed clusters of round to plasmacytoid cells with moderate to abundant cytoplasm embedded in a chondromyxoid ground substance. The nuclei were monomorphic, centrally to eccentrically located and had fine chromatin [Figure 1]. The combination of mesenchymal and epithelial elements suggested a diagnosis of chondroid syringoma. The lesion was excised and subjected to histopathological examination.

Histology: The sections showed an encapsulated tumor with large areas of cartilaginous differentiation along with a few small, ductular structures lined by two layers of cells, luminal cuboidal and peripheral flattened, confirming the diagnosis of chondroid syringoma. There was no evidence of extension of the tumor beyond the capsule.

Eccrine spiradenoma:

A 40 year old female presented with a firm, tender swelling located in the anterior chest wall. It measured approximately 0.8cm in diameter. The clinician thought it would be a neurofibroma and she was sent for FNAC of the nodule. Aspiration yielded blood-tinged mucoid material.

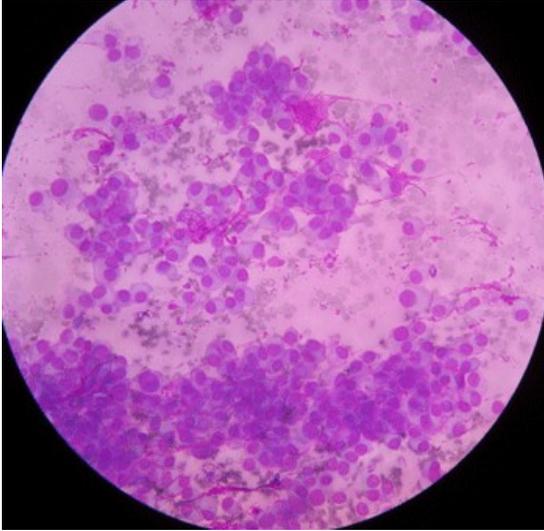


Figure 1: Cytomorphology suggesting chondroid syringoma.

Cytomorphology: The smears were moderately cellular and contained cohesive sheets and clusters of bland cells of variable size. These cells were also present singly in the background along with smaller lymphocyte-like cells, granular proteinaceous material and numerous rbc. Three main cell types were recognized: large epithelial cells which were occasionally seen. 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 lymphocytelike cells with round dark nuclei and scant cytoplasm predominated the smears. Some of the cells were arranged around a central globule of amorphous material [Figure 2].

Histology: The resected mass was 0.7cm well circumscribed, round, subcutaneous nodule surrounded by a thin fibrous capsule. It was composed of closely packed cells arranged in sheets, cords and trabeculae along branching, hyalinised stromal matrix. In some areas, a pseudorosette pattern was formed by cells surrounding irregular, rounded globules of this stroma. There were three main cell types within the tumor. The largest cells, which were epithelial, were arranged as cords and trabeculae lining hyalinised stromal matrix and small, duct-like lumina. A second, intermediate cell type were arranged around hyalinised stroma, forming a pseudorosette appearance. These cells were seen in the more sclerotic, peripheral regions of the nodule. The third cell type which was lymphocyte-like in appearance, was scattered diffusely throughout the mass.

Discussion:

Chondroid syringoma

Chondroid syringoma is a rare benign skin adnexal tumor of eccrine/apocrine origin affecting commonly the head and neck region.^{4,5} The term introduced by Hirsch and Helwig in 1961, has now been widely accepted to replace the older term mixed tumor of the skin.^{1,6,7} It is thought to originate from both secretory and ductal segments of the sweat glands and both eccrine and apocrine variants have been described. It usually affects middle aged or older age male patients. In our case, chondroid syringoma was diagnosed in a 20 year old female. Clinically, it presents as a slow growing, painless, firm, subcutaneous or intra-cutaneous nodule. The lesion measures 0.5 – 3cm in diameter. The sites of predilection are on the head and neck region, particularly, cheek, nose or lip. But, it can also rarely develop on the scalp, eyelid, orbit, auditory canal, hand, foot, forehead, axillary region, abdomen, penis, vulva and scrotum.^{8,9}

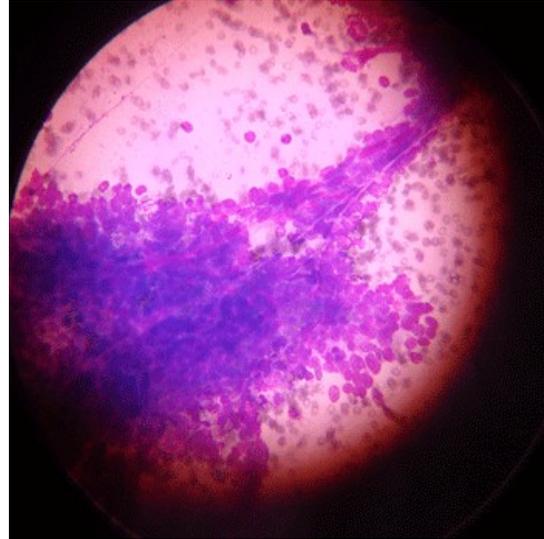


Figure 2: Cytomorphology suggesting Eccrine spiradenoma.

Fine needle aspirate yields thick, mucoid and gelatinous material as in this case. Microscopically, there are two distinct components, an epithelial and a mesenchymal, which easily render the diagnosis. The epithelial cells are in flat monolayered sheets or as single cells. The nuclei are monomorphic with finely dispersed nuclear chromatin. Some of the nuclei are eccentrically placed like plasmacytoid cells. They have moderate amount of dense cytoplasm with well defined cell borders. These cells are seen against a background of fibrillary chondromyxoid substance. Immunohistochemical markers such as epithelial membrane antigen, which is used as an epithelial marker and Vimentin, S-100 protein, Neuron specific enolase are used to demonstrate the myoepithelial component. The differential diagnosis includes basal cell carcinoma with stromal hyalinization and malignant mixed tumor of the skin. If the mesenchymal component predominates, the possibility of a soft tissue tumor can be considered.

If the cellular component predominates, the differential diagnosis includes carcinomas with a myxoid component, myoepithelial tumors due to the plasmacytoid appearance of the cells and spindle cell tumors.^{1,2,4-10}

Eccrine spiradenoma

Eccrine spiradenoma is an uncommon benign cutaneous adnexal tumor arising in eccrine sweat glands that was first described by Sutton in 1934 and extensively described by Kersting et al in 1956. Head and neck is a common location but it may also occur on the trunk, extremities and in various other sites. It usually occurs in young adults. The lesion is mostly solitary and is one among the painful tumors of the skin.^{3,5,10}

Fine needle aspirate yields a mucoid, yellow material. Cytologically, three main cell types are identified – large epithelial cells, intermediate sized myoepithelial cells and small lymphocyte like cells. Some of the cells are arranged in a cribriform pattern with rosette like structures and cell balls or acini surrounding cores of amorphous matter. Identification of the three cell types in this tumor is of paramount importance to differentiate it from adenoid cystic carcinoma which is composed of single, monotonous cell type. Immunohistochemically, epithelial cells show positivity for keratin; myoepithelial cells are weakly positive for keratin and small lymphocyte like cells are positive for CD3.^{2,3,5,10-13}

Conclusion

There was a good cytohistologic correlation in both the cases. Cutaneous adnexal tumors are rarely encountered on FNA. Hence, knowing the cytologic features of primary skin

neoplasms helps distinguish them from tumors metastatic to the skin. Cytologic features, along with a detailed clinical history and physical findings are essential to make an exact diagnosis of skin tumors for appropriate management of the patient.

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