

Ectopic mammary tissue in unusual sites - cytological diagnosis with histopathological correlation – a report of 2 cases

Sainath Karnappa Andola¹, Uma Sainath Andola², Mukta Ahuja¹

¹Department of Pathology, ²Department of Obstetrics and Gynecology M.R.Medical College, Gulbarga,India.

Abstract

Ectopic mammary gland tissue is a residual tissue that persist during the embryologic development along ectodermal primitive streaks. Incomplete involution anywhere along the primitive milk streak can result in ectopic mammary tissue. These are more common in axilla and unusually occur in buttock, back of neck, face, flanks, arms, shoulders, midline of back and chest. Vulval lesions in general are infrequent. They respond to hormonal influences at puberty, in the menstrual cycle and during pregnancy and lactation. Also they can develop same pathological changes as normally positioned breasts like fibroadenomas and breast carcinomas. Case 1 : 28 year old female presented with nodular swelling in right labia majora measuring 2.5X2 cms. During menstruation it enlarged and was associated with pain. Case 2 : 35 year old nulliparous female presented with a nodule in left groin measuring 3X2.5cms. In both cases the nodules were firm and movable. Fine Needle Aspiration Cytology was done in both and reported as accessory breast in the first case and the second case favoured the diagnosis of fibroadenoma in accessory breast tissue. The lesions were excised and submitted for histopathological examination. Both were confirmed to be accessory breast and fibroadenoma in accessory breast respectively. We report here two cases of ectopic breast tissue, one in vulva and other in groin, both diagnosed first on Fine Needle Aspiration and later confirmed by histopathological examination. To the best of our knowledge such cases have been reported earlier but on tissue sections.

Key Words: Ectopic mammary tissue, Vulva, Fibroadenomas, Fine Needle Aspiration Cytology and Breast carcinomas.

INTRODUCTION

Ectopic or accessory breast tissue may occur anywhere along the embryonic line which runs from anterior axillary folds to the inner thigh. Such examples were common above the umbilicus than below. The occurrence of breast tissue in perineum is extremely rare.^[1] Incomplete involution anywhere along the primitive milk streak could result in accessory or ectopic mammary tissue. Most often ectopic place of breast line is axilla and then vulva. Ectopic breast can be found outside milk streaks, at the back, thighs. Face, lips, upper parts of the shoulder and feet.^[2] These ectopic mammary tissue can undergo the same pathological changes as normally positioned breasts such as fibroadenoma and carcinoma.^[3] The ectopic tissue can be surgically excised if symptomatic or if it represents a cosmetic problem. The clinical work up and appropriate therapies need to be in case of ectopic breast tissue.^[2]

To the best of our knowledge this diagnoses has only been made on tissue sections.^[4] In this article we present two cases of ectopic breast tissue in the perineal region, one in vulva and other in groin, both diagnose on

Fine Needle Aspiration Cytology and later confirmed by histopathological examination.

CASE SUMMARY

Case 1 : An 28 years old female patient presented with nodular swelling in the right labia majora since 6 months. There was associated pain and enlargement in the swelling during menstruation. There was no associated inguinal lymphadenopathy. Nodule was movable, measuring 2.5X 2 cms with irregular surface and soft to firm in consistency (Figure 1). Both breasts were normal and no axillary swelling was present.

FNAC was done and the aspirate revealed hemorrhagic and dark brown liquid with ductal epithelial cells in clusters and monolayered sheets. Many bare nuclei and cyst macrophages were also seen. Diagnosis of accessory breast tissue was made cytologically. Later excision of lesion was done and subjected for histopathological examination. Grossly the enucleated mass measured 2X2 cms and was roughly ovoid and firm. On cut section it was grey white with lobulated appearance. Microscopy confirmed diagnosis of accessory breast tissue in labial region.

Case 2 : A 35 year old nulliparous female presented with nodule in left groin since 2 years. It measured 3 X 2.5 cms and was firm in consistency. There

Address for correspondence*

Sainath K Andola, Department of
Pathology, M.R.Medical College, Gulbarga
Email : drskandola@gmail.com

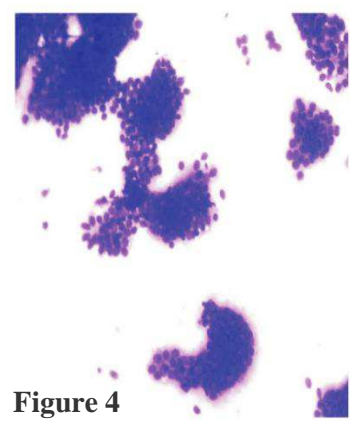
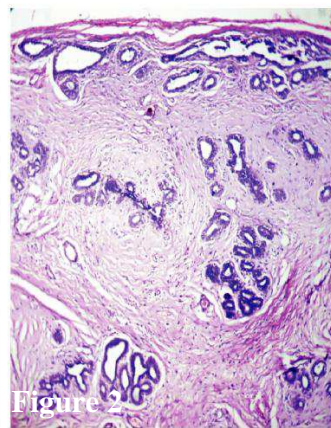


Figure 1: Nodule over right labia majora. **Figure 2:** 1. Branching papillary fronds along with bare nuclei (Giemsa stain, 400X). **Figure 3:** Cut section of capsulated mass reveals homogenous grey white appearance. **Figure 4:** Fibroadenoma ectopic breast (H & E, 100X).

Case 2 : A 35 year old nulliparous female presented with nodule in left groin since 2 years. It measured 3 X 2.5 cms and was firm in consistency. There was no associated axillary swelling or breast lump.

FNAC was done and cellular aspirate revealed monolayered sheets of benign ductal epithelial cells with branching processes and many bare nuclei (Figure 2). Occasional fragments of fibrillary fibromyxoid stroma noted which favoured the diagnosis of fibroadenoma, ectopic breast tissue. After excision, grossly the mass measured 3 X 2 cms and was solid and rubbery. Cut section revealed encapsulated mass with homogenous greywhite appearance (Figure 3). Microscopically it was confirmed as fibroadenoma arising from accessory breast tissue (Figure 4).

DISCUSSION

Ectopic mammary gland tissue is a residual tissue that persists during embryologic development, found in 1-2% of women in general population, with the greatest rate described as 6%. Incomplete involution anywhere along the primitive milk streak could result in accessory or ectopic mammary tissue.^[2] Most often ectopic place of the gland is axilla, probably as a centre of big lymph nodes and then vulva. There are rare, unusual locations, usually referred as “mammariae erratae”: buttock, back of neck, face, flank, upper arm, hip, shoulders and midline of the back and chest.^[5]

The ectopic breast show morphological changes of hormone response during menstrual cycle as seen in the first case. At times the aberrant glands may remain quiescent and unnoticed through out puberty as seen in the second case. The occurrence of ectopic breast tissue in the vulva is rare and less than 50 cases had been reported^[6]. Vulval breasts, although congenital in origin do not as a rule attract attention until they become enlarged or active at the time of puberty or in association with pregnancy or lactation.^[3] There are literature

descriptions of ectopic breasts with benign cystic changes, benign tumors (adenomas and fibroadenomas) and carcinomas. Hence they present a great diagnostic challenge. Although rare, there are case reports of mammary carcinoma of vulva for instance.

Fortunately this ectopic tissue often represents only a cosmetic problem. In this context, it can be surgically excised and also whenever symptoms such as tenderness and local discomfort. In cases of malignant mass, wide surgical excisions are recommended with follow up treatments.^[5]

CONCLUSION

Ectopic mammary gland tissue in vulva is very rarely found and wherever it occurs these ectopic mammary tissue can undergo the same physiological and pathological (fibroadenomas and carcinomas) changes as normally positioned breasts a challenge for the surgeons and pathologists to make a correct diagnosis.

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