CASE REPORT

Fibroadenoma: Common Neoplasm in an Uncommon Site

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Abstract:

Vulval fibroadenoma is an uncommon benign tumour that has been suggested to originate from ectopic breast tissue or mammary like anogenital glands. We report a case of a 26 years old woman who presented with a large, slow growing painless mass in vulvar region since 2 months with a clinical diagnosis of sebaceous cyst/ Inclusion epidermoid cyst. Excision was done and on histopathological examination it was reported as ectopic breast tissue with fibroadenoma and lactational change.

Keywords: Ectopic breast, Fibroepithelial lesion, Vulva

Introduction:

Ectopic breast tissue is defined as presence of glands located outside the breast which usually originates from the primordial milk lines which are extended from axilla till the groin. It occurs as a result of incomplete involution along the primitive milk streak [1]. Vulval fibroadenoma is a mammary like fibroepithelial lesion which is frequently of uncertain histogenesis [2]. It is a very rare benign lesion that occurs in vulva with an incidence of 2-6% and is difficult to differentiate it from other vulval masses on clinical examination [3]. It is usually seen after puberty with age group ranging from 20-80 years [2].The exact etiology of these lesions is not known. The possible histogenesis may be ectopic mammary tissue and mammary like anogenital glands [4-5]. We report a case of vulval swelling diagnosed as ectopic breast tissue with fibroadenoma and lactational change in a 26 years old female who presented with painless swelling in vulva.

Case Report:

A 26 year old young female presented with complain of swelling on the vulvar region since 2 month. It was painless. On examination swelling was nontender and freely mobile measuring 4×3 cm in labia major of vulva. There was no significant family or past history. High resolution ultrasonography of pubic region revealed relatively well defined hypoechoic lesion measuring 5.7×2.8×2 cm with solid and cystic components in deep subcutaneous tissue of pubic region on the left side. The lesion was hypovascular on colour doppler so the possible clinical diagnosis of sebaceous cyst or inclusion epidermoid cyst was given. With provisional diagnosis of sebaceous cyst/ Inclusion epidermoid cyst excision was done and sent for histopathological examination. Gross examination of the specimen received showed single, irregular globular tissue mass measuring 4×3×1 cm with attached adipose tissue. Cut surface of the mass was solid, pale white and nodular. Areas of necrosis or hemorrhage were absent (Fig.1). Representative sections were given and slides were stained with Hematoxylin and Eosin (H&E) stain. On microscopic examination sections showed a tumor tissue comprised of hyperplasic ducts and stroma. Ducts were lined by two layered

epithelium, consisting of inner cuboidal to columnar and outer myoepithelial cells. Ducts showed intracanalicular and pericanalicular pattern with fibromyxoid stroma (Fig.2). Few cystically dilated glands were also noted. Focally ducts showed epithelial cells with vacuolated cytoplasm suggestive of lactational change. There was no evidence of dysplasia or malignancy, so it was reported as ectopic breast tissue with fibroadenoma and lactational change. Immunohistochemistry was done for ER and PR which was negative.

Fig. 1: Gross Photograph of Cut Surface Showing Solid, Pale White and Nodular Areas

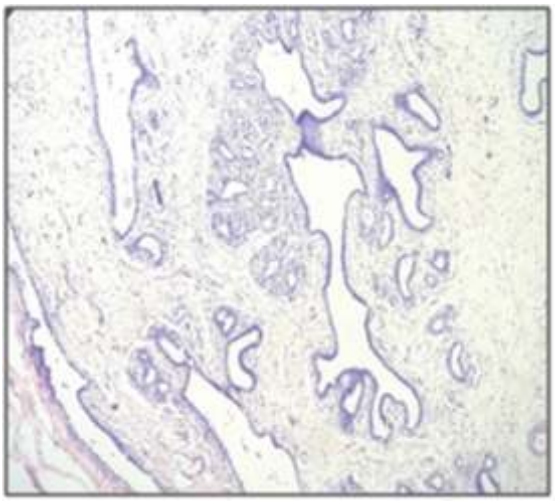

Fig. 2: Photomicrograph showing Fibro-adenoma Comprised of Hyperplastic Ducts and Fibromyxoid Stroma (H&E, 100×)

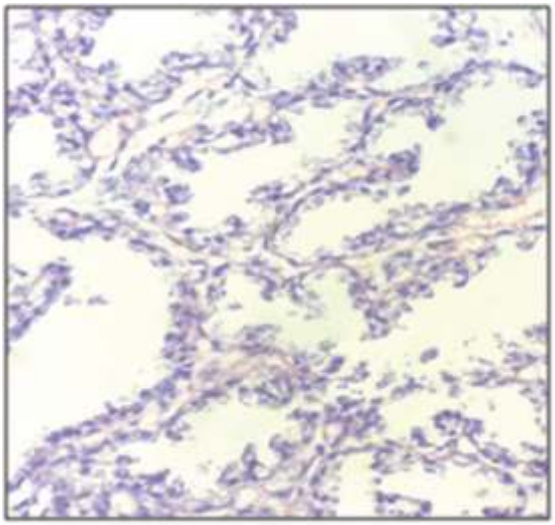

Fig. 3: Photomicrograph Showing Ductal Epithelial Cells with Vacuolated Cytoplasm Suggestive of Lactational Change (H&E 400×)

Discussion:

Ectopic breast tissue can arise anywhere along the primitive embryonic milk line. Most frequent sites are thorax and axilla. As vulva too lies all along the embryonic milk line, it can give rise to ectopic or accessory breast tissue. Ectopic breast tissue in vulva can rarely lead to both benign as well as malignant neoplasms [6, 8]. First case of vulvar ectopic breast was reported in 1872 by Hartung [2, 4]. Two theories have been proposed in order to explain the histogenesis of ectopic breast tissue in vulva. The first theory is dependent on the existence of embryonic milk lines. The milk lines are presumed to be ectodermal ridges or thickenings, which appears during the 5th week of gestation and extends from upper and lower limb buds when the embryo measures 7 mm in length. Soon there is involution and regression of these milk lines except for the milk line present in the mid thoracic region which matures and develops into breast. Ectopic mammary tissue arises when there is incomplete involution along the mammary streak. The second theory is put forth by Putte in 1954 which states that there are specialised glands in vulva which are similar to mammary glands and are called as mammary like anogenital glands that can give rise to benign conditions like fibroadenoma and malignant conditions like extramammary pagets disease and invasive adenocarcinoma [2-4]. Vulval fibroadenoma occurs in the age group of 20-80 years as solitary cutaneous or subcutaneous nodules on labia majora. It presents as asymptomatic, painless or painful swelling which can often be bilateral. Clinically it is usually misdiagnosed as follicular cyst, epidermal cyst, Bartholin's duct cyst, hidradenoma papilliferum, intraductal papilloma, syringoma, apocrine adenoma, lipoma and pseudoangiomatous stromal hyperplasia [2, 9].

In the present case also probable clinical diagnosis made was sebaceous cyst/inclusion epidermoid cyst. Malignant conditions like extramammary Paget's disease, ductal/lobular/mucinous adenocarcinoma, ductal carcinoma in situ and mammary-like carcinoma can be considered among the differential diagnosis for vulval fibroadenoma [2, 7].

In the present case extensive sampling of tissue was done to rule out malignancy and there was no evidence of in situ carcinoma or malignancy. However in present case lactational change was noted, for which detailed clinical history was taken which revealed history of lactation. Like normal breast tissue the ectopic breast also expresses hormones receptors which can be detected by immunohistochemistry. In the present case immunohistochemistry was done which was negative for ER and PR. Literature search revealed more than 50 benign tumors and 20 malignant tumors in ectopic breast tissue of vulva. Bardsley Petterson described 13 cases of primary breast carcinoma originating from the vulval mammary tissue. Yin *et al.* illustrated the first case of ectopic mammary tissue in vulva with mucinous adenocarcinoma [2]. Treatment of choice for ectopic breast lesions is complete surgical excision. In the present case excision was done and the patient was followed for 6 months and there was no recurrence after excision.

Conclusion:

Although the incidence of pathological lesions of ectopic breast tissue in vulva is extremely rare, the clinicians must consider them as one of the differential diagnosis of labial masses preoperatively. The ectopic breast tissue can transform to both benign and malignant lesions seen in normal breast, hence thorough examination and follow up of ectopic breast tissue in vulva is must for early detection of neoplastic conditions.

References

1. Dhaoui A, Haifa N, Kchir N, Haouet S. Vulvar lactating adenoma associated to a fibroadenoma: common neoplasm in an uncommon site. *Pan Afr Med J* 2012;13:47.
2. Kalyani R, Srinivas MV, Veda P. Vulval fibroadenoma-A report of two cases with review of literature. *Int J Biomed Sci* 2014; 10(2): 143-145.
3. Lucas EW, Branton P, Mecklenburg FE, Moawad GN. Ectopic breast fibroadenoma of the vulva. *Obstetr Gynaecol* 2009; 114(2): 460-462.
4. Leon DC, Montiel DP, Vazquez H, Hernandez C, Cetina L, Lucio MH. Vulvar Fibroadenoma: a common neoplasm in an uncommon site. *World J Surg Oncol* 2009; 7: 1-4.
5. Carter JE, Mizell KN, Tucker JA. Mammary-type fibroepithelial neoplasms of the vulva: a case report and review of the literature. *J Cutan Pathol* 2008;35: 246-249.
6. Deb PM, Swarnup D, Mishra GC. Fibroadenoma of aberrant breast tissue in the vulva. *Med J Armed Forces India* 2000; 56(2): 153-154.
7. Moore M, McKenna M, Mandavilli S, McCluggage WG. Fibroadenoma-like lesion of the vagina: a description of 2 cases of a previously unreported entity. *Int J Gynecol Pathol* 2018; 37(2): 141-146.
8. Arafah M, Zaidi S. Fibroadenoma of ectopic mammary tissue in the vulva – a case report. *J King Abdulaziz UniverMed Sci* 2011;18(1):89-96.
9. Niraj M, Choudhrie L. Fibroadenoma of ectopic breast tissue in the vulva: a case report. *J Obstetr Gynecol India* 2010;60(6):529-530.

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