

Fibrocystic Change in the Male Breast: A Case Report and Review of Literature of a Rare Entity.

Umobong EO¹, Ugwu VI², Ojo BA³, Eke BA⁴, Gyenger D⁵, Usher R⁵

¹ Department of Laboratory Medicine, State House Medical Centre Abuja, Nigeria

² Department of Histopathology, National Orthopedic Hospital Enugu, Nigeria.

³ Department of Anatomic Pathology, Benue State University Teaching Hospital Makurdi, Nigeria.

⁴ Department of Surgery, Benue State University Teaching Hospital, Makurdi, Nigeria.

⁵ Department of Anatomic Pathology, Benue State University Teaching Hospital, Makurdi-Nigeria

Correspondence: Umobong EO, Department of Laboratory Medicine, State House Medical Centre Abuja, Nigeria

E-mail: babarinde087@gmail.com Phone: +2348100555792

Article information

Date Submitted: 27/07/2023

Date Accepted: 18/12/2023

Date Published: 10/01/2024

ABSTRACT

Fibrocystic change of the breast is a common occurrence in women. To the clinician, the term might mean "lumpy bumpy" breasts on palpation; to the radiologist, a dense breast with cyst; and to the pathologist, a benign histological finding. It is much less frequent in male and generally ignored, though occurring clinically in up to 50% and histologically in 90% of women. We present this rare case of fibrocystic change of the breast in a 30 year old male patient to illustrate an unusual occurrence with the hope that clinicians will keep an open mind while approaching any breast case.

Keywords: Fibrocystic change of the breast, male.

INTRODUCTION

Breast is composed of specialized epithelium and stroma, with numerous structural and functional elements, which can develop benign or malignant lesions. The fibrocystic change of the breast is a common occurrence in women. To the clinician, the term might mean "lumpy bumpy" breasts on palpation; to the radiologist, a dense breast with cysts; and to the pathologist, a benign histological finding¹. It is seen as a wide spectrum of altered morphology in the female breast from innocuous to those with associated risk of carcinoma².

It is observed clinically in up to 50% and histologically in 90% of women^{2,3,4}. Often diagnosed between the ages of 20 and 40 years, hormonal alterations with estrogen

dominance over progesterone are considered to be an important factor in the female population and because it is hormonally linked, it is much less frequent in male but generally ignored².

We present this rare case of fibrocystic change of the breast in a 30 year old male patient to illustrate an unusual occurrence with the hope that clinicians will keep an open mind while approaching any breast case.

CASE REPORT

A 30 year old male patient presented with complaints of 6 years left breast mass. It was said to be painless with insidious onset and progressive. There was no history of similar complaints in the contra-lateral breast and no history of discharge from the nipple. He did not give any history of trauma or fever.

How to cite this article

Umobong EO*, Ugwu VI, Ojo BA, Eke BA, Gyenger D, Usher R.
Fibrocystic Change in the Male Breast: A Case Report and Review of Literature of a Rare Entity. J Biomed Res Clin Pract: 2024;7(1):00-00.
DOI: <https://doi.org/10.5281/zenodo.10720594>



Access to the article

Website: <http://www.jbrcp.org>



: DOI: 10.5281/zenodo.10720594

General physical examination was unremarkable. Local examination of the breast shows slight fullness in the lower inner quadrant of the left breast and the nipple areola complex was normal. Palpation revealed a 2.5x2.5cm solitary, spherical soft to firm swelling in the lower inner quadrant. No regional lymphadenopathy was noted and the contra-lateral breast was normal. Secondary sexual characters were well defined and of male pattern. Examination of the genitalia was normal and both testes were symmetrical, well developed and of normal volume. There were no evidence of chronic liver disease or occult malignancy.

A presumptive diagnosis of gynecomastia was made. Routine investigations done were within normal limits.

The patient then underwent excision of the lesion under general anesthesia. The lesion was well-circumscribed and easily dissected from surrounding normal breast tissue. The post-operative period was uneventful.

Surgical pathology of the mass grossly, revealed breast tissue with dense collagenous stroma. In the stroma are seen dilated ducts lined by double layer of epithelial cells, inner-cuboidal and outer myoepithelial cells, (Figure 1). A focus shows a dilated cystic duct that is lined by an attenuated epithelium (Figure 2).

A histopathological diagnosis of left breast fibrocystic change of the breast was made.

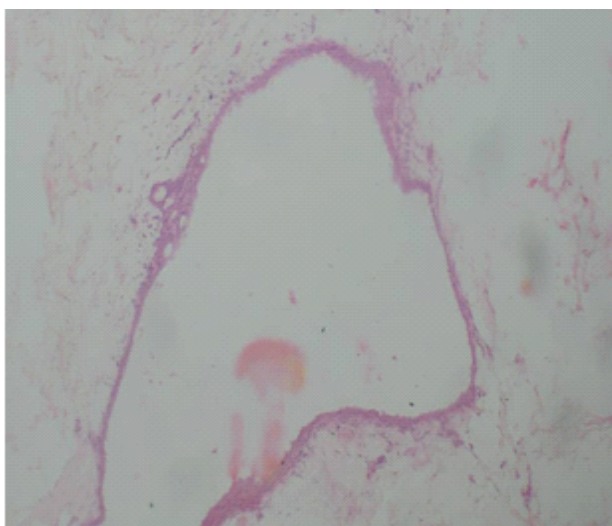


Figure 1 (X40,H&E).

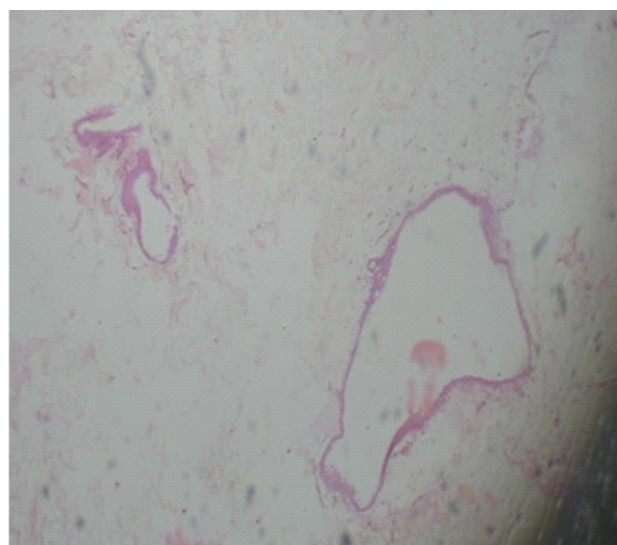


Figure 2 (X40,H&E)

In the stroma are seen dilated ducts lined by double layer of epithelial cells, inner-cuboidal and outer myoepithelial cells, (Figure 1). In a focus is seen a dilated cystic duct that is lined by an attenuated epithelium (Figure 2).

DISCUSSION

Fibrocystic change of the breast also known as diffuse cystic mastopathy is a benign alteration in the terminal ductal lobular unit of the breast with or without associated fibrosis². It is a common condition in females with three principal morphological changes, namely cystic change often with apocrine metaplasia, fibrosis and adenosis^{1,5}.

This is a rare finding in males, and very few cases have been reported in the literature⁴.

Hormonal alterations with estrogen dominance over progesterone are considered to be an important factor. In females, estrogen stimulates proliferation of connective tissue as well as epithelial tissues.

The generic term ANDI (aberrations of normal development and involution) is introduced to allow breast problems to be placed within an overall framework of pathogenesis⁶; this concept also permits more detailed individual assessment with respect to normality and disease⁶. Fibrocystic disease and its synonyms are discarded in favor of terms that are strictly descriptive in favor of terms that are strictly of clinical and/or histological picture⁶. Aberrations in normal development and involution encompasses all the

changes associated with normal variations in breast parenchyma associated with changes in hormones and ageing, and thus classify fibrocystic change under ANDI and it is not to be treated as a pathology per se².

The pathophysiology of fibrocystic change is poorly understood in the male and may be associated with hormonal changes, paraneoplastic syndrome, or a morphological variation of gynaecomastia^{7,8}. No identifiable cause was present in our patient.

Histologically, it present with three principal morphological changes namely:

Cysts which are formed by the dilatation of lobules and in turn may coalesce to form large cysts. Cystic change may present with apocrine metaplasia; Fibrosis which result from ruptured cysts releasing secretory materials into the adjacent stroma with subsequent chronic inflammation and fibrosis contributing to the palpable nodularity of the breast; and adenosis which represent an increase in the number of acini per lobule and is a normal feature of pregnancy. In non-pregnant women, adenosis can occur as a focal change¹

The cyst fluid demonstrates various colors and may contain turbid, semi translucent fluid of a brown or blue color to milky color, depending on the stage of the disease and degradation of the cyst content^{1,5}.

Diagnosis is by imaging technique and histology. Ultrasound findings may show prominent fibroglandular tissue in the area of palpable nodules, however, no discernible mass with small cysts in to mammary zone². Mammography features include breast with heterogeneous and usually dense parenchyma. Partially circumscribed may be present reflecting cysts with a tea-cup, low-density round calcifications in multiple lobes². In patients with asymptomatic disease, only follow up is required⁴. For discrete large or suspicious lesions, an excision is the treatment of choice⁴.

CONCLUSION

Fibrocystic change of the breast is a rare condition of the male breast, the diagnosis which is often incidental after imaging and histology. While it's occurrence in the male may be idiopathic, it may be associated with underlying

gynaecomastia or in the setting of hormonal imbalance. Clinicians should keep an open mind about its occurrence.

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