Giant Fibroadenoma Masquerading as Cystosarcoma Phylloides in an Elderly Lady—A Case Report and Review of Literature

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Abstract Giant Fibroadenoma is commonly seen in young women. Here, we are reporting the case of an elderly lady who was diagnosed with Cystosarcoma Phylloides clinically and by FNAC. Simple mastectomy was performed and histopathology revealed a Giant Fibroadenoma. This report focuses on the rarity of the age of presentation, confusing clinical features, role of FNAC and histopathology, the need to differentiate them and the modalities of treatment.

Keywords Giant fibroadenoma · Cystosarcoma phylloides

Introduction

Giant fibroadenoma and cystosarcoma phylloides are two diseases of the breast which can be thought of as differential diagnoses for huge breast lumps. Preoperatively, it is important to differentiate between them, because of the variation in their presentation and pathology which determine their treatment modalities.

Case Report

A 60-year-old lady presented with a gradually progressing painless right breast lump since 10 years. There was no nipple discharge or systemic complaints.

On examination, a nontender, mobile lump measuring 25×15 cm with variable consistency (soft to firm) was noted. The overlying skin was stretched with visible veins (Fig. 1). The axillary lymph node areas were normal. Fine-needle aspiration cytology (FNAC) of the lump was reported as cystosarcoma phylloides.

Simple mastectomy was performed. Grossly, the lesion measured $22 \times 15 \times 10$ cm (Fig. 2). On cut section a large grey white growth measuring 17×8 cm was 1 cm deep from the resected margin (Fig. 3). Microscopically, the tumour showed proliferation of ducts and stromal fibrous tissues. The ducts were lined by cuboidal cells with spindle to polygonal stromal cells, both with vesicular nuclei (Fig. 4). These features were suggestive of a fibroadenoma.

Discussion

The following discussion compares both diseases with respect to age of presentation, size, malignant potential, clinical features, investigations, histopathology and treatment.

Table 1 shows differentiating clinical features between the two conditions. Fibroadenoma and cystosarcoma share many cytological features and hence FNAC has a doubtful role [1]. However, core tissue biopsy is a better diagnostic procedure. Both appear as well-circumscribed masses on mammography and are solid on ultrasonography [2].

Table 2 shows the histopathological variations between the two.

The treatment option for fibroadenoma is either excision or observation because many are self-limiting [3]. In cystosarcoma, wide excision with negative margins is required to prevent recurrence. Simple mastectomy is the preferred surgery and breast-conservation surgery is currently done for aesthetic concerns [4]. Axillary dissection is performed only

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Fig. 1 Huge breast lump with visible veins

Fig. 4 Microscopic appearance

Fig. 2 Gross specimen

Table 1 Differentiating clinical features

Clinical features	Fibroadenoma	Cystosarcoma phylloides
Age	15–25 years	40–50 years
Size (Average)	1–2 cms (giant-5 cms)	4 cms
Malignant potential	Absent	Present
Rate of growth	Gradual	Rapid
Surface	Smooth	Lobular

Fig. 3 Cut section

Table 2 Histopathological variants

Histopathological variants	Fibroadenoma	Cystosarcoma Phylloides
Cut surface	Well demarcated, lobulated, firm white to grey tumor	Well demarcated, leaf like appearance, firm grey white
Capsule	Fibrous pseudocapsule	Unencapsulated
Stroma	Less cellular	Highly cellular
Epithelial clefts	Short	Elongated and branching
Atypia and mitosis	Absent	Mild to moderate atypia with increased mitosis

in the presence of axillary lymphadenopathy because of the rarity of lymph node involvement [5]. The rate of local recurrence ranges from 8 to 46% and is determined by factors such as age, tumor size, surgical approach, mitotic activity, stromal overgrowth and surgical margin [6].

Thus, fibroadenomas occur in younger patients, are smaller in size and have no malignant potential. FNAC is inaccurate in differentiating between the two conditions, and core tissue biopsy may be a better modality. Although many other investigations are available, only histopathology has proven to be a reliable investigation. It is necessary to differentiate between the two because of the malignant potential of the cystosarcoma and the need to obtain negative surgical margins. Hence, surgery has to be pursued early in cystosarcoma, whereas observation is an option in fibroadenoma.

Conclusion

Old age is an uncommon age for the presentation of giant fibroadenoma. A diagnosis of cystosarcoma made on clinical examination and FNAC was disproved on histopathology. Giant fibroadenoma and cystosarcoma phylloides

are two diseases of breast that need to be preoperatively diagnosed as their treatment modalities are different.

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