

# Fibroadenoma Breast: Diagnosis, Management, and Real World Clinical Perspectives

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**Abstract:** *Fibroadenoma remains one of the most frequently encountered benign breast tumors, particularly among younger women, often presenting as a painless, movable lump. In my view, what makes this condition both clinically common and personally distressing is the anxiety it evokes due to its resemblance to more serious pathologies. This article delves into the multifaceted nature of fibroadenomas—ranging from simple to complex, juvenile to giant forms—while exploring their hormonal underpinnings, diagnostic pathways, and treatment modalities. It is evident that estrogen plays a key role in tumor growth, especially during hormonally dynamic phases such as puberty and pregnancy. That said, not all fibroadenomas require surgical removal; many are managed conservatively unless growth, discomfort, or atypical imaging prompts excision. This raises another point: the lack of standardized guidelines for complex and giant types often leaves both clinicians and patients in a grey zone of uncertainty. Taking this further, the review highlights real-world cases and synthesizes recent literature to reflect a nuanced understanding of the clinical decision-making process. Ultimately, while fibroadenomas are rarely life-threatening, their varied presentations demand individualized care, ongoing surveillance, and empathetic patient counselling.*

**Keywords:** Fibroadenoma, benign breast tumor, lump, giant cell, lumpectomy

## 1. Introduction

A fibroadenoma is a very common benign tumor (not cancer) in the breast. It usually feels like a smooth lump in the breast. Fibroadenomas can occur at any age but are more common in younger women. But it can be found at any age in anyone who has periods

## 2. Definition

A fibroadenoma is a painless unilateral, benign (non-cancerous) breast tumor that is solid not fluid filled lump.

## 3. Review of Literature

i) Giant juvenile fibroadenoma: a systematic review with diagnostic and treatment recommendations, Michael Sosin, Marisa Pulcrano, Elizabeth D Feldman, Ketan M Patel, Maurice Y Nahabedian, Jason M Weissler, Eduardo D Rodriguez, *Gland surgery* 4 (4), 312, 2015

**Background** Currently, there is a lack of clear guidelines regarding evaluation and management of giant juvenile fibroadenomas. The purpose of this study was to conduct a systematic review of giant juvenile fibroadenomas and to evaluate the most common diagnostic and therapeutic modalities. **Methods** A systematic literature search of PubMed and MEDLINE databases was conducted in February 2014 to identify articles related to giant juvenile fibroadenomas. Pooled outcomes are reported. **Results** Fifty-two articles (153 patients) met inclusion criteria. Mean age was 16.7 years old, with a mean lesion size of 11.2 cm. Most patients (86%) presented with a single breast mass. Imaging modalities included ultrasound in 72.5% and mammography in 26.1% of cases. Tissue diagnosis was obtained using a core needle biopsy in 18.3% of cases, fine-needle aspiration (FNA) in 25.5%, and excisional biopsy in 11.1% of patients. Surgical treatment was implemented in 98.7% of patients (mean time to treatment of 9.5 months, range, 3 days to 7 years). Surgical intervention included excision in all cases, of which four were mastectomies. Breast reconstruction was completed in 17.6% of cases. There were no postoperative

complications. **Conclusions** Diagnosis and treatment of giant juvenile fibroadenoma is heterogeneous. There is a paucity of data to support observation and non-operative treatment. The most common diagnostic modalities include core needle or excisional biopsy. The mainstay of treatment is complete excision with an emphasis on preserving the developing breast parenchyma and nipple areolar complex. Breast reconstruction is uncommon, but may be necessary in certain disease.

ii) Complex fibroadenoma: bibliometric literature review and presentation of a clinical case

Ana Beatriz Aguiar Cardoso, Gabriele Cristina Schröder, Polyanna Zimermann, Thiago Santos Lima Almendra, Antonione Santos Bezerra Pinto, *Mastology* 30, 1-7, 2020

Fibroadenomas (FAs) are benign fibro-epithelial tumours of the breast characterized by being biphasic and having stromal and epithelial components. It is estimated that FAs affect more than 20 percent of the general population aged 16–40 years old. Complex FAs are a sub-type of fibroadenoma presenting one or more pathological characteristics, such as epithelial calcifications, apocrine metaplasias, sclerosing adenoma and cysts larger than 3 mm. According to studies elsewhere, women with complex FAs are 3.1 times more likely to develop breast cancer. The objective of the present study was to map the scientific production of articles on complex FA in the international literature. The ISI Web of Knowledge (Web of Science), one of the main scientific databases in the world, was searched with the following terms: (“complex” and “fibroadenoma”) or (“fibroadenoma” and “complex”). Only articles published between 1981 and 2019 were considered for a bibliometric review, in which 160 articles from 126 different periodicals were identified after using refinement filters.

## 4. Risk factors

- Family history
- Hormonal fluctuations
- Life style factors

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- Hormonal replacement therapy
- Cyclic stimulation of breast by estrogen

## 5.Types of fibroadenoma

### Simple fibroadenoma

Most fibroadenoma are about 1 to 3 cm in size and are called simple fibroadenoma. When looked at under a microscope simple fibroadenomas look the same all over.

### Complex fibroadenoma

Some fibroadenomas are called complex because it looked under the microscope some of the cells have different features.

### Giant fibroadenoma

Occasionally a fibroadenoma can grow to more than 5 cm. This may be called a giant fibroadenoma

### Juvenile fibroadenoma

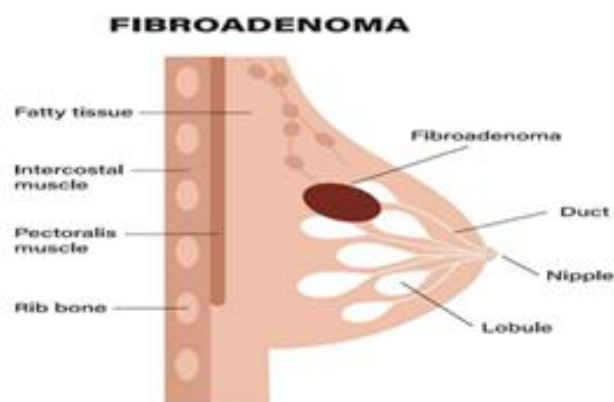
A fibroadenoma found in teenage girls may be called a juvenile fibroadenoma

### Etiology

- Hormonal fluctuations particularly related to estrogen
- Oral contraceptives
- Family history
- Life style high fat diet alcohol consumption and smoking
- Radiation exposure

## 6.Pathophysiology

Fibroadenoma it is a benign breast tumor characterized by proliferation of stromal and epithelial cells. The main cause of fibroadenoma is hormonal imbalance especially estrogen and progesterone hormones. This hormone mainly increasing the period of puberty and pregnancy. Genetic factors also implicated in fibroadenoma.



### Case study of Mrs. X

A 32 years old female has admitted in the hospital for the complaints of painless and mobile lump present in the right

breast. Lump was gradual onset and progressive in nature. Its size increased gradually in past 6 month.

### Clinical manifestations:

- A firm smooth or rubbery lump in the breast a well-defined shape
- Painless lump and mobile lump
- Slow growing tumor
- Easily moved
- Smooth borders

### Diagnostic evaluations

- History collection
- Physical examination
- Complete blood count
- Ultrasonography in breast
- Electrocardiogram
- Fine needle aspiration cytology
- Needle biopsy

### Management

#### Medical management

- Medical management of fibroadenoma often involves observation especially for smaller asymptomatic lumps.
- Hormonal medications such as selective estrogen modulators like Tamoxifen may be prescribed to block estrogen receptors and potentially reduce fibroadenoma size
- Gonadotropin releasing hormone agonists can be used to treat the excessive production of estrogen and progesterone it helps to shrinkage or even dissolution of the fibroadenoma

#### Surgical management

- Surgery may be considered for large rapidly growing or symptomatic fibroadenomas or if the results of imaging or biopsy are concerning surgical options include
  - **Lumpectomy**
    - This involves surgically removing the entire fibroadenoma
  - **Cryoblation**
    - A cryoprobe is used to freeze and destroy the fibroadenoma
  - **Vacuum assisted Biopsy**
    - A procedure where tissue is removed using a vacuum device

### Nursing management

#### Preoperative nursing management

- Assess the patient condition
- Monitor the patient vital signs
- Take the informed consent from the patient and family members
- Prepared the surgical site
- Administered preoperative medications as per doctor's order
- Administered medications as per doctor's order

#### Post operative nursing management

- Assess the patient condition
- Monitor the vital signs
- Administered medications as per doctor's order
- Provide diversional therapy
- Apply sterile dressing over the surgical site
- Provide health education
- Provided psychological support
- Monitor for any complications

### Author Profile



Mrs. Kavitha has completed her B.Sc (Nursing) in College of Nursing, Madurai Medical College, Madurai, Tamilnadu, India 2016.

### Nursing diagnosis

- Acute pain related to surgical incision as evidenced by numerical pain scale
- Impaired skin integrity related to surgical incisions as evidenced by surgical wounds
- Activity intolerance related to pain as evidenced inability to do the activity of daily living
- Imbalanced nutrition less than body requirement related to inadequate intake of food as evidenced by loss of appetite
- Sleep pattern disturbances related to pain as evidenced by verbalization of patient

### Complications

- Swelling
- Bruising
- Infection
- Bleeding
- Scarring
- Recurrence of the fibroadenoma

## 7.Conclusion

Fibroadenoma are benign breast tumors, and while they can cause anxiety due to their nature as a lump, they are generally harmless and don't increase the risk of breast cancer. Management primarily involves monitoring but surgical excision may be necessary for larger or symptomatic masses. Regularly self-exams and screenings are crucial for peace of mind and early detection of any changes.

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