

EXCISION OF GIANT FIBROADENOMA UNDER LOCAL ANAESTHESIA AS A DAY-CARE SURGICAL PROCEDURE: A CASE REPORT

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India. DOI: <https://doi.org/10.5281/zenodo.23116791>

How to cite this Article: Dr. Shubham Wayal* (2026). Excision of Giant Fibroadenoma Under Local Anaesthesia As A Day-Care Surgical Procedure: A Case Report. World Journal of Pharmaceutical and Medical Research, 12(10), 324-329.
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Article Received on 05/09/2026

Article Revised on 25/09/2026

Article Published on 03/10/2026

ABSTRACT

Background: Fibroadenoma is one of the most common benign fibroepithelial lesions of the breast, particularly among young women. Although most fibroadenomas are small and asymptomatic, occasionally they may attain a large size and produce breast asymmetry, discomfort and cosmetic concerns. Lesions measuring more than 5 cm are generally described as giant fibroadenomas. Large breast fibroepithelial lesions may present a diagnostic challenge because giant fibroadenoma and phyllodes tumour can have similar clinical and radiological characteristics. Definitive diagnosis may therefore only become apparent after complete surgical excision and histopathological examination. **Case Presentation:** A 38-year-old female presented with a large breast lump. Clinical assessment and preoperative evaluation were suggestive of a giant fibroadenoma. The patient was planned for surgical excision. Considering the location and accessibility of the lesion, excision was performed under local anaesthesia as a day-care surgical procedure. The excised specimen measured $9 \times 7 \times 4.5$ cm. The specimen was sent for histopathological examination. Surprisingly, histopathology demonstrated a biphasic fibroepithelial tumour with increased stromal cellularity, mild to moderate stromal atypia and focal permeative growth. The final histopathological impression was a borderline phyllodes tumour. **Surgical Intervention:** The tumour was completely excised through a planned breast incision under local anaesthesia. The mass was mobilised from the surrounding breast tissue, removed in toto, and sent for histopathological examination. Haemostasis was achieved and the wound was closed primarily. **Outcome:** The patient tolerated the procedure under local anaesthesia and was managed as a day-care surgical case. The final histopathological examination changed the diagnosis from the clinically suspected giant fibroadenoma to a borderline phyllodes tumour. **Conclusion:** Excision of a clinically suspected giant fibroadenoma under local anaesthesia may be feasible in carefully selected patients and may permit day-care management. However, large breast fibroepithelial lesions require histopathological examination because fibroadenoma and phyllodes tumour may overlap clinically and radiologically.

KEYWORDS: Giant fibroadenoma; breast lump; phyllodes tumour; borderline phyllodes tumour; local anaesthesia; day-care surgery; breast surgery; fibroepithelial tumour.

INTRODUCTION

Fibroadenoma is a common benign fibroepithelial tumour of the breast. It is particularly prevalent in young women and commonly presents as a painless, mobile, well-circumscribed breast lump.

Most fibroadenomas are relatively small. However, occasionally the lesion may undergo marked enlargement. A fibroadenoma measuring more than 5 cm is commonly referred to as a giant fibroadenoma. Such lesions may produce breast asymmetry, stretching of the skin, discomfort, heaviness and considerable cosmetic

concern.

The differential diagnosis of a rapidly enlarging or unusually large breast mass includes giant fibroadenoma and phyllodes tumour. Phyllodes tumours are also fibroepithelial lesions and may closely resemble fibroadenomas clinically and on imaging. Consequently, definitive differentiation may be difficult before excision.

Phyllodes tumours are classified histologically into benign, borderline and malignant categories. This

classification is based on several pathological parameters, including stromal cellularity, stromal atypia, mitotic activity, tumour margins and stromal overgrowth.

Surgical excision is commonly performed for large, symptomatic, rapidly growing or diagnostically uncertain breast masses. It provides both therapeutic treatment and adequate tissue for definitive histopathological diagnosis.

Breast surgery is frequently performed under general anaesthesia, particularly for large lesions. However, selected superficial and accessible breast lesions can potentially be excised under local or regional anaesthesia. A published case has demonstrated successful excision of a giant fibroadenoma using regional anaesthesia, highlighting the feasibility of avoiding general anaesthesia in appropriately selected patients.

The present case is noteworthy because a large breast lump clinically managed as a giant fibroadenoma was successfully excised under local anaesthesia as a day-care procedure, while subsequent histopathological examination unexpectedly demonstrated a borderline phyllodes tumour.

CASE PRESENTATION

A 38-year-old female presented with a large breast swelling.

The patient was evaluated clinically, and the lesion was considered to be a benign breast mass. Based on the clinical assessment and preoperative work-up, a diagnosis of giant fibroadenoma was considered.

The patient was counselled regarding surgical excision, possible postoperative pain, bleeding, haematoma, seroma, wound infection, scar formation and cosmetic outcome.

The available histopathology documentation identifies the patient as a 38-year-old female and describes the specimen as a breast lump submitted following excision. The lesion was selected for surgical excision because of its large size and the need for definitive diagnosis.

Clinical Examination

A complete breast examination was performed.

The following parameters should be documented in the final case record: Site of the lesion

Size of the swelling Mobility Consistency Surface

Margins

Relation to surrounding breast tissue Condition of overlying skin.

Nipple and areolar changes Axillary lymph nodes Contralateral breast examination Breast asymmetry.

The lesion was clinically considered to be a large benign

fibroepithelial breast tumour, with giant fibroadenoma being the provisional diagnosis.

Diagnostic Work-up

Breast Imaging

Breast ultrasonography was performed as part of the preoperative evaluation.

The imaging findings should be reported in the final manuscript exactly as documented in the patient's radiology report, including:

Size: 10 × 4 cm

Site: right breast in retroareolar region at 8 o'clock

Echogenicity: hypoechoic

Mammography may be considered according to the patient's age and clinical circumstances.

Imaging alone may not reliably distinguish a large fibroadenoma from a phyllodes tumour because of overlapping clinical and radiological features.

Tissue Diagnosis

Where clinically indicated, FNAC or core needle biopsy may be performed before excision.

However, distinguishing fibroadenoma from phyllodes tumour can remain difficult in limited tissue samples. Histological examination of the complete excision specimen may therefore be required for definitive diagnosis.

Differential Diagnosis

The differential diagnosis of a large breast mass included:

1. Giant fibroadenoma
2. Phyllodes tumour
3. Giant juvenile fibroadenoma
4. Hamartoma
5. Lipoma
6. Other benign fibroepithelial lesions
7. Less commonly, malignant breast lesions

The major diagnostic consideration in this case was the distinction between giant fibroadenoma and phyllodes tumour.

Preoperative Assessment

The patient underwent routine preoperative evaluation. This included:

Complete history and physical examination Breast imaging

Routine laboratory investigations Anaesthetic assessment Assessment of the size and location of the lesion Evaluation of the expected surgical plane.

Assessment of the patient's suitability for local anaesthesia.

The patient was counselled regarding the proposed procedure and the possible need for modification of the anaesthetic technique if adequate analgesia could not be

achieved.

Written informed consent was obtained for the surgical procedure.

Surgical Technique

The patient was positioned supine with appropriate exposure of the affected breast.

The operative field was prepared using standard aseptic precautions and sterile draping was performed. A suitable incision was planned with consideration of both adequate exposure and cosmetic outcome. Local anaesthesia was infiltrated into the operative field.

The exact local anaesthetic used, concentration, total volume and dose should be inserted from the operative record.

The incision was deepened through the subcutaneous tissue and the tumour was identified.

The tumour was carefully dissected circumferentially from the surrounding breast tissue. The plane between the tumour and adjacent breast tissue was developed and the mass was progressively mobilised.

The tumour was completely excised and removed in toto. The excised specimen was inspected, measured and sent to the histopathology laboratory for definitive examination.

Haemostasis was achieved.

The wound was closed in layers and an appropriate dressing was applied. The patient was subsequently shifted for postoperative observation.

Day-Care Management

Following the procedure, the patient was observed for:

Pain Bleeding Haematoma Seroma Dizziness

Nausea or vomiting

Local anaesthetic-related complications Wound condition

After satisfactory postoperative assessment and fulfilment of standard discharge criteria, the patient was discharged with appropriate instructions.

Why Local Anaesthesia?

The choice of local anaesthesia was an important aspect of this case.

Large breast tumours are commonly excised under general anaesthesia because of the anticipated surgical duration and extent of dissection. However, local or regional anaesthetic techniques may be appropriate in selected patients with accessible lesions. A published case report demonstrated successful excision of a giant fibroadenoma using regional anaesthesia and highlighted the potential feasibility of avoiding general anaesthesia for selected breast procedures.

Potential Advantages Include

Avoidance of general anaesthesia
Reduced systemic anaesthetic exposure
Early postoperative recovery
Potential reduction in postoperative nausea and vomiting
Early mobilisation
Day-care feasibility
Reduced hospital stay

Potential cost reduction
Patient convenience

However, local anaesthesia should not be considered suitable for every large breast tumour. Careful patient selection and availability of appropriate anaesthetic and surgical backup are essential.

Histopathological Examination

The excised specimen was sent to the histopathology laboratory after surgery.

Gross examination showed a single whitish solid tissue mass measuring 9 × 7 × 4.5 cm. Microscopic examination demonstrated a biphasic fibroepithelial tumour.

The epithelial component consisted of benign ducts and cleft-like spaces lined by benign ductal epithelium with an intact myoepithelial layer.

The stromal component was expanded and demonstrated moderate to marked cellularity, composed of spindle-shaped cells. Mild to moderate atypia was identified.

The periphery of the tumour demonstrated foci of permeative growth. No stromal overgrowth was identified.

The mitotic rate was approximately 2–3 mitoses per 10 HPF. The final impression given in the pathology report was:

“Features are those of borderline Phyllodes tumour.”

The margins were free of tumour, with the closest margin reported as approximately 1 mm.

This unexpected histopathological finding changed the final diagnosis from the clinically suspected giant fibroadenoma to a borderline phyllodes tumour.

DISCUSSION

The present case demonstrates an important diagnostic issue in the management of large breast fibroepithelial lesions.

The lesion was clinically considered to be a giant fibroadenoma and was excised accordingly. However, histopathological examination demonstrated a borderline phyllodes tumour.

Giant fibroadenomas are generally defined as fibroadenomas greater than 5 cm. They may produce significant breast enlargement and distortion. Because phyllodes tumours can present in a similar manner, the two lesions may be difficult to distinguish before surgery.

Phyllodes tumours are biphasic fibroepithelial neoplasms

consisting of epithelial and stromal components. Their grading depends predominantly on the stromal component. Stromal cellularity, atypia, mitotic activity, stromal overgrowth and tumour borders are considered important pathological parameters.

The histopathology in the present case demonstrated increased stromal cellularity, mild to moderate stromal atypia and focal permeative growth. These findings resulted in the final diagnosis of borderline phyllodes tumour.

Importantly, the histopathological report did not describe the lesion as malignant phyllodes tumour or carcinoma. The diagnosis was specifically borderline phyllodes tumour. Borderline phyllodes tumours represent an intermediate histological category and require appropriate breast-surgical follow-up because local recurrence is an important consideration.

Another important feature of the present case was the anaesthetic technique.

Despite the relatively large size of the tumour, the lesion was excised under local anaesthesia and managed as a day-care procedure. Previous literature has demonstrated that large breast fibroepithelial tumours can be removed using regional anaesthetic techniques in carefully selected patients.

The case therefore highlights two important clinical lessons.

First, a large breast mass clinically suspected to be fibroadenoma should undergo appropriate evaluation and histopathological confirmation because the final diagnosis may be phyllodes tumour.

Second, the size of the lesion alone does not necessarily mandate general anaesthesia. In carefully selected patients, local or regional anaesthesia may permit safe surgical excision with early recovery and day-care management.

Outcome

The patient tolerated the surgical procedure under local anaesthesia.

The lesion was completely excised and submitted for histopathological examination.

There was no documented need for conversion to general anaesthesia during the procedure. The patient was managed postoperatively as a day-care surgical patient.

The final histopathological diagnosis was borderline phyllodes tumour, with the closest margin measuring approximately 1 mm.

Advantages of the Approach

The present case suggests several potential advantages of performing excision under local anaesthesia in appropriately selected patients:

1. Avoidance of general anaesthesia
2. Reduced anaesthetic burden

3. Potentially faster postoperative recovery
4. Day-care feasibility
5. Early mobilisation
6. Reduced hospital stay
7. Potential cost-effectiveness

8. Patient convenience

However, these advantages should be interpreted cautiously because this is a single case and does not establish superiority over general anaesthesia.

Limitations

This report represents a single patient experience.

Local anaesthesia may not be suitable for every giant breast lesion. Tumour depth, location, vascularity, anticipated duration of surgery, patient anxiety, pain tolerance and the extent of dissection must all be considered.

Furthermore, the final diagnosis in this case was borderline phyllodes tumour rather than fibroadenoma. Therefore, the case demonstrates the feasibility of excision of a clinically diagnosed giant fibroadenoma under local anaesthesia, rather than establishing local anaesthesia as a standard treatment for phyllodes tumours.

CONCLUSION

Excision of giant fibroadenoma under local anaesthesia as a day-care surgical procedure can be a feasible approach in carefully selected patients with a large, accessible breast lesion.

In the present case, a 9-cm breast mass clinically considered to be a giant fibroadenoma was successfully excised under local anaesthesia. However, histopathological examination unexpectedly revealed a borderline phyllodes tumour.

The case emphasizes the importance of submitting all excised breast masses for complete histopathological examination, as giant fibroadenoma and phyllodes tumour may have overlapping clinical presentations.

It also demonstrates that, with appropriate patient selection, surgical planning, anaesthetic assessment and postoperative monitoring, local anaesthesia may be considered for selected large breast tumour excisions in a day-care setting.

Further case series and prospective studies are required to establish the safety, reproducibility, patient satisfaction and cost-effectiveness of this approach.

Photographic Documentation

Intraoperative, specimen and postoperative photographs documenting the surgical procedure and outcome.



Figure 1: Intraoperative photograph showing the breast incision and exposed operative field.



Figure 2: Intraoperative photograph showing the operative field and tumour dissection.



Figure 3: Excised breast tumour specimen.



Figure 4: Postoperative photograph showing the breast incision and wound appearance.