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**EXCISION OF MULTIPLE AND RECURRENT FIBROADENOMA;  
ANALYSIS OF SURGICAL OUTCOMEWITH PERIAREOLAR INCISION**

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**ABSTRACT**

**Background**

Fibro-adenoma of breast, the most common benign breast condition among women under 35 years of age, accounts for up to 94% of all biopsied breast lumps. Despite no necessary need, the fibro-ademoais often excised due to incumbent anxietyand asymmetry (if enlarged). The excision methods are many with an even greater variety of incisions practiced in each technique, yet no consensus exists regarding the best incision for the excision of multiple and recurrent fibro-adenomas.

**Objective**

To determine the surgical outcome following peri-areolar incision for the excision of multiple and recurrent fibro-adenomas.

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## Methodology

This cross-sectional analysis was carried out from November 2018 to January 2019 upon a sample of 87 female patients (aged 15 to 35), presenting to the Dept. of Surgery at Dow University Hospital, Karachi with multiple and recurrent fibro-adenomas (chosen via non-probability, purposive sampling). Data obtained regarding surgical outcome (in terms of areolar necrosis, loss of nipple sensation, hematoma, surgical site infection and patient satisfaction) was recorded onto a self-structured proforma after taking written informed consent. The data obtained was analyzed using SPSS v. 22.0.

## Results

Surgical site infection, hematoma, Loss of nipple sensation and areolar necrosis were reported on first follow-up among 12.64%, 9.2%, 8% and 5.75% of the patients respectively. The aesthetic outcome was perceived good in majority (65.52%) of the patients on last final follow-up.

## Conclusion

After careful consideration, it can be concluded that peri-areolar incision for the excision of multiple and recurrent fibro-adenomas offer great promise of favorable outcome.

**Keywords: Fibro-Adenoma, Breast Lump, Breast Surgery, Peri-Areolar Incision and Surgical Outcome**

## INTRODUCTION

Fibro-adenomas (FAs) are benign tumors of the breast typically composed of stromal and epithelial cells. Since they arise from lobules, it is not surprising that these are seen predominantly in women in the 15–25 age group, even though they may be diagnosed later. FA should not be regarded as a neoplasm. FAs usually grow to 1 or 2 cm in diameter and growth beyond 5 cm is sufficiently uncommon to justify being regarded as a disease. Multiple FA (defined by more than 3 or 5 lesions in one breast,

depending on authors) too are considered a disease [1, 2].

In young women, the clinical features are very characteristic. The FA is smooth, round or lobulated, firm with discrete swelling and high mobility. This last feature is due to encapsulation and to the softness of the breast at this age. FA in older woman are much less characteristic, because of the involution fibrotic changes. FA may present a smooth border outlined by the mammary fat. It may look identical to a cyst, but needle aspiration will easily differentiate the two. In

postmenopausal period, half of the FA will show typical stippled “pop-corn” calcification [3, 4].

Concerning the treatment, the conservative approach is acceptable at any age if there has been a triple assessment unequivocally benign, with a core needle biopsy providing definitive histology after 25 years. Otherwise, if any feature is atypical or if the patient wishes to get rid of it, surgery is indicated. There has been a tendency in Europe to treat FA with hormonal therapy (progestogens, tamoxifen), but the results have only been partially assessed [5, 6].

Fibro-adenomas can be left alone for follow-up with regular ultrasonography at 6 monthly interval. But are usually excised as these create anxiety and asymmetry (if enlarged). Surgical excisions are carried out to completely enucleate the fibro-adenoma with some normal breast tissue and avoiding iatrogenic deformity to the breast. There are several ways to excise fibro-adenoma like endoscopic breast surgery, vacuum-assisted percutaneous excisional biopsy and percutaneous thermo-ablation. It can be excised through traditional surgical incision often radial incision over the tumor or by peri-areolar incision [7, 8].

For the patients who have multiple fibro-adenomas breasts; the round block method of

incision is practiced, which spares nipple areolar complex and by reduction mammoplasty of Rezai. There are countless issues that may arise when it comes to multiple fibro-adenomas of breast. They are removed either by several incisions over the lumps, or by circum-areolar incision. Nevertheless, the only issue that is seen in several incision methods is that it gives an ugly appearance. The procedure of removing the lumps performed by an incision; which should be regarded as aesthetically acceptable, the periareolar incision actually fulfills this need [9, 10].

Literature is scanty about the management of multiple and recurrent fibro-adenomas, addressing the choice of incision, number of incisions, and the dissection method. Excision by periareolar incision is believed to carry certain disadvantages like hematoma formation, prolonged operative time and areolar necrosis yet it has better cosmetic outcome. This study will help determine the outcome of periareolar incision in cases of multiple and recurrent fibro-adenomas.

## METHODOLOGY

This cross-sectional analysis was carried out from November 2018 to January 2019 upon a sample of 87 female patients (aged 15 to 35), presenting to the Dept. of Surgery at Dow University Hospital, Karachi with multiple

and recurrent fibro-adenomas (chosen via non-probability, purposive sampling). Data obtained regarding surgical outcome (in terms of areolar necrosis, loss of nipple sensation, hematoma, and surgical site infection and patient satisfaction) was recorded onto a self-structured proforma after taking written informed consent. The data obtained was analyzed using SPSS v. 22.0.

**RESULTS**

Surgical site infection, hematoma, Loss of nipple sensation and areolar necrosis were reported on first follow-up among 12.64%, 9.2%, 8% and 5.75% of the patients respectively. The aesthetic outcome was perceived well in majority (65.52%) of the patients on last final follow-up.

Table 1

OUTCOME	1 <sup>st</sup> FOLLOW-UP VISIT	2 <sup>nd</sup> FOLLOW-UP VISIT
Surgical Site Infection	12.5%	4.6%
Hematoma	9.2%	-
Loss of Nipple Sensation	8.0%	8.0%
Areolar Necrosis	5.8%	-

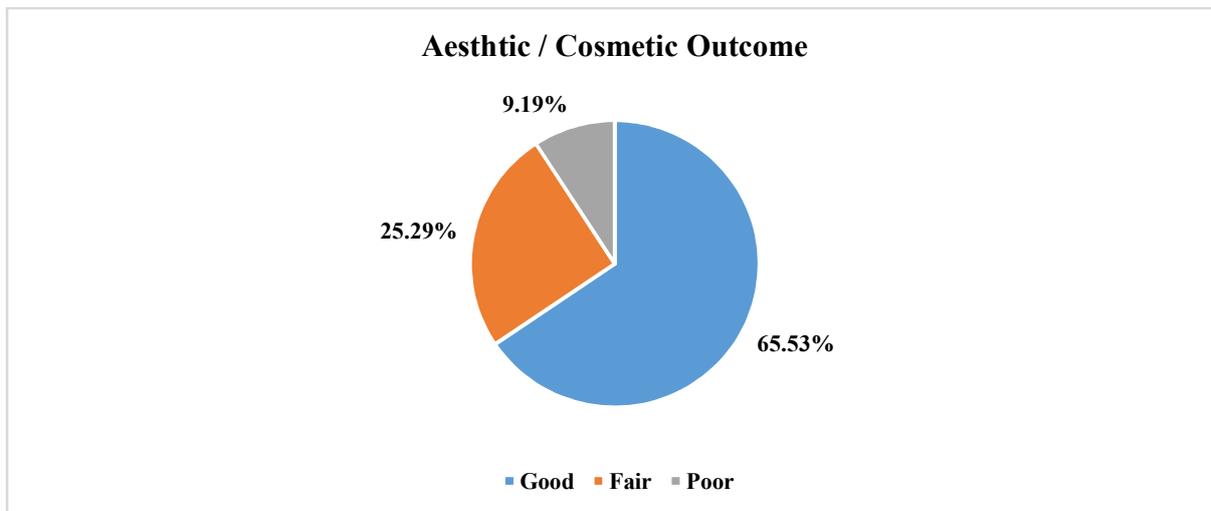


Figure 1

**DISCUSSION**

Fibroma adenomas are common benign tumors which present in late adolescence i.e. in the mid-twenties. This aligns with the mean age of our sample which stood at 27 years ( $\pm 6$  SD). The most common indications

for surgery were large visible mass (31.04%) and discomfort (24.12%) among others. Thus showing that cosmetic and aesthetic appearance took precedence over physical discomfort. Similar trends are observed in some part of the world (particularly the

developed world), but most research originating from the developing and third world countries argues otherwise where patients often resort to surgical intervention in instances of high physical discomfort [11, 12].

It was common finding in this research that 4 or more fibro-adenoma were present in the patients. This is supported by evidence from extensive case series which report 3-4 fibroadenomas to be common in patients. However, more than 5 fibro-adenoma are uncommon. Regarding the main variable of the research, i.e. the peri-areolar incision; many interesting results were yielded. Published evidence is divided on the matter with some reporting low complication rates while others reporting an excess [13, 14].

This research reported that 9.2% patients presented with a hematoma on 1st follow-up. Literature mirrors this finding with published evidence suggesting a norm of up to 15% of incidence of hematoma formation. Surgical site infection was seen among 12.64% of the patients on 1st follow-up in this research and it decreased further to 4.6%. Similar trends are noticed in published evidence with a reported rate of complication ranging from 10 to 18%. However, stark disparities too exist in solitary single center studies reporting a hike of as much as 54% [15, 16].

The aesthetic outcome was perceived to be good in majority (65.52%) of the patients on last final follow-up. Literature however is divided on the matter with most research reporting humble satisfaction. There is however, scarcity of evidence with which this finding may be compared [17, 18].

### CONCLUSION

It is concluded that peri-areolar incision for the excision of multiple and recurrent fibro-adenomas offers great promise of favorable outcome. The surgical site infection rates are low, adverse outcomes are minimal and aesthetic / cosmetic acceptance of the surgical outcome is perceived largely good.

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