

Case Series

Swiss roll method of fibroadenoma excision: a case series

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ABSTRACT

Fibroadenoma of 5 cm or more is called as giant fibroadenoma. Cosmesis is an important consideration while making breast incisions, especially in young adults. In our case series 15 girls of age group 18-30 years having giant fibroadenoma in breast were considered for the study and underwent Swiss roll method of fibroadenoma excision. 3 cm and 4 cm incisions were made for giant fibroadenoma of ≤ 6 cm and >6 cm in size respectively. Post-operative scars and cosmetic results were documented. In our study, average size of fibroadenoma was 6.5 cm. 10 patients (66.66%) had 3 cm incision and 5 patients (33.33%) had 4 cm incision. Breast shape and symmetry is maintained with acceptable scar in all our patients postoperatively. Swiss-roll operation can be considered as cosmetically acceptable surgery for giant fibroadenomas.

Keywords: Fibroadenoma, Giant fibroadenoma, Swiss roll method, Cosmesis

INTRODUCTION

Fibroadenomas are most common, benign, painless breast tumours most commonly occurring in women between the age group of 14 to 35 years. They are stimulated by hormones such as estrogen and progesterone, pregnancy, lactation and they undergo atrophic changes in menopause. They are made up of both glandular tissue and stromal (connective) tissue. It is estimated that 10% of the world's female population suffers from fibroadenoma once in a lifetime.¹ The fibroadenomas are usually smaller in size, but in some cases it can grow to immense proportions and cause compression and displace normal breast tissue, and also stretching of overlying skin and nipple areola complex.² Giant fibroadenomas are lumps >5 cm in diameter. Management may present challenges if the mass is increasing in size or is symptomatic. In the developing breast the risk of iatrogenic injury is high compared to benefits of surgery. Cosmesis is an important consideration when making breast incisions especially in young girls. Excision of giant fibroadenoma poses a significant challenge and is generally performed through sub mammary incision, which may produce unacceptable

scarring.³ In our technique we remove them through cosmetically acceptable circumareolar incision to maintain the shape and symmetry of breast.⁴

CASE SERIES

This study was conducted in the department of general surgery at Rajarajeswari Medical College and Hospital, Bengaluru, over a period of 6 months from February 2021 to July 2021. The study included, all women in the age group of 18-30 years with giant fibroadenomas (>5 cm) and willing for follow up of minimum 6 weeks post-surgery. Excluding women with small fibroadenomas (<5 cm), previously operated, lactating women and who failed follow up.

A total of 15 patients were eligible for our study. After written and informed consent by the patients, data was collected, which included - clinical findings, ultrasound report and fine needle aspiration cytology (FNAC) report. All our patients underwent Swiss roll technique of excision of fibroadenoma under general anaesthesia. In this technique, 3 cm and 4 cm incisions were made in

circumareolar region for giant fibroadenoma of ≤ 6 cm and >6 cm in size respectively. Breast skin mobilized over the lump. The lump mobilized using the index finger until it was completely free from the surrounding breast tissue. The lump was grasped using Allie's forceps and pulled up to the skin, and an oblique incision was made into the fibroadenoma. This incised portion brought out of the incision, and the lump was progressively incised and rotated out until the entire mass was taken in a 'Swiss-roll' type fashion (Figure 1). Haemostasis was secured. Wound closed in two layers, underlying subcutaneous layer by vicryl 3-0 interrupted sutures and skin was closed with monocryl 3/0 continuous subcuticular stitches (Figure 2). Pressure bandage applied, which was removed on 3rd postoperative day. The excised lump was sent for histopathological examination. All patients were given intravenous and oral antibiotics, PPIs and adequate analgesics. Patients were followed up at regular intervals upto 6 weeks for assessment of cosmetic results.

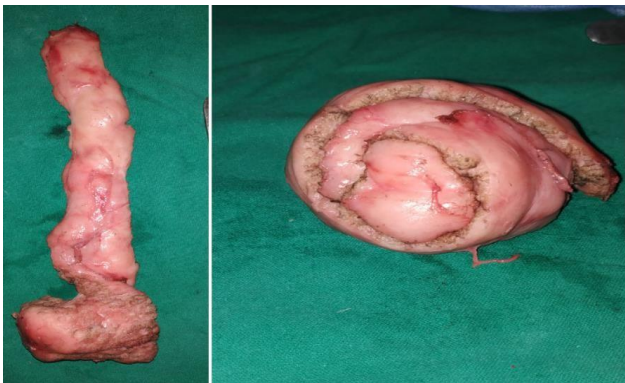


Figure 1: Excised specimen of giant fibroadenoma by swiss roll technique.



Figure 2: Post-operative scar after circumareolar incision.

In our case series, patients age ranged from 18 to 30 years with mean age of 23.13. All fibroadenomas were unilateral. Majority of the patients had fibroadenoma on left side i.e. 9 (60%), while 6 (40%) patients were having on right side. It was most commonly present in upper outer quadrant, in 11 (73.33%) patients, while 4 (26.66%) were

in lower outer quadrant. Mean tumour size 6.5 cm, largest was 15 cm and smallest was 5 cm. The length of incision was 3 cm in 10 (66.66%) patients for tumour ≤ 6 cm in size and 4 cm incision was given for tumour >6 cm in 5 (33.33%) patients.

Cosmetic results were documented post operatively during follow up period for 6 weeks with acceptable minimal scar in 6 (40%) patients as all of them developed seroma which was treated conservatively with single aspiration. Breast shape and symmetry is maintained in all (100%) of our patients (Table 1).

Table 1: Cosmetic results.

Parameters	Frequency	Percent
Scar marks		
None	9	60
Minimal	6	40
Breast		
Normal shape	15	100
Symmetrical	15	100

DISCUSSION

Giant fibroadenoma is the most common cause of breast enlargement and cause asymmetry of breast. If giant fibroadenoma is diagnosed, surgical excision is necessary, in order to avoid mass effects such as ulceration, skin changes, venous congestion and pain.⁵ There is no consistent surgical approach to giant fibroadenoma in literature. For cosmetic purpose, a technique with a small incision was found to be ideal provided it is simple, safe and has low tumour recurrence rate. Submammary incision produce large scar and may not be hidden by the non-pendulous smaller breast.⁶ Swiss-roll operation allows these large tumours to be removed through cosmetically acceptable small circumareolar incision.⁷ Soomro et al study showed the length of incision was 3 cm in 42 (60%) patients for tumour <6 cm in size and 4 cm incision was given for tumour >6 cm in 28 (40%) patients, which was consistent with our study i.e. the length of incision was 3 cm in 10 (66.66%) patients for tumour <6 cm in size and 4 cm incision was given for tumour >6 cm in 5 (33.33%) patients.⁸

CONCLUSION

Swiss roll technique of giant fibroadenoma excision is safe, technically simple, less handling of breast tissue and hence, it is the best technique in young woman especially when concerning with breast symmetry and outstanding cosmesis. It can be adopted as a day care surgery too.

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