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Breast surgeries at a day care centre: A clinical experience

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Abstract
Objective: To develop breast surgery protocol to allow patients to be operated and discharged on same day with minimum discomfort and complications.
Materials and Methods: Over a period of 2 years, patients with breast disorders were diagnosed and underwent day care surgery. Patient selection was done using a predetermined criteria. All surgeries were performed under general anaesthesia with drain inserted as per requirement. Follow up until wound healing was done.
Results: A total of 136 patients were operated (females: 92.8%, males: 7.2%), aged 26-45 years. Average surgical duration was <100min and most of them were discharged on same day of surgery; few within 23 hours. Bleeding, surgical site infection and drain complications were well tackled, only 2 patients needing re-surgery. Patient and family satisfaction was 8.2 on a 1-10 scale.
Conclusion: This day care breast surgery was well planned and patients were discharged within 23 hours, with no adverse effects.

Keywords: Breast surgery, discharge, day care, adverse effects

Introduction
India today is witnessing an increasing rate of women being diagnosed with carcinoma of breast and also the surgeries associated with it. Owing to the fact that working population is largely hit by the disease, there is an increasing demand for day care surgical procedures, which allows the patients to undergo treatment with minimum hospital stay and leave from work.
The day care concept (<23 hrs admission) has been largely limited to procedures performed under local or regional anaesthesia, requiring minimal postoperative monitoring and was applicable for cataracts, hernias, haemorrhoids and minor ENT procedures. On the contrary, breast surgery has been managed in the past as inpatients due to concerns about drain care and the lack of structured outpatient follow-up care. However, the landscape for breast cancer care has gradually changed over the years. Breast awareness among urban population, early stage presentation, quality diagnostics and establishment of less radical, breast sparing surgeries and sentinel biopsy techniques, have enabled surgeons to attain a low post-operative complication rate which can be managed easily at the breast care facilities. Furthermore, when the patients are well informed and connected to the consultant, post-surgical issues are well taken care of without delay. All these have led to a greater push towards day care breast surgery.
Providing day care surgery largely is dependent on having a set-up that is functionally capable of all services. Apollo Spectra hospital, Bangalore is a stand-alone building with the state-of-art facilities and an expert consultant and counselling group. Separate out-patient department, guidance counsellor to follow through, well equipped operation theatres and adjoining post-operative ward that allows immediate attention of the well trained nurses, attending surgeons and anaesthesiologists to the patients in case of any complications allows appropriate patient care. All these factors enable a comfortable atmosphere for patients and their attenders to accept day care surgeries with ease. The aim of this study was to evaluate the breast surgeries as a day care procedure at our centre and to review the benefits and adverse effects associated with it.

Materials and methods
A prospective study was conducted at Apollo Spectra Hospital, Bangalore on 124 patients who underwent breast surgeries from July 2016-July 2018.

A total of 156 breasts were operated in the period which included both unilateral and bilateral disorders as well as benign and malignant. Patient demographics, nature of the disease, surgical plan, duration of surgery, in patient course/complications, duration of hospital stay and the post-operative complications with the management were recorded. Descriptive statistics were applied.

The triple examination was conducted and a date for the surgery was decided for all patients. They underwent pre-anaesthetic assessment with the in- house anaesthesiologists and required fitness along with optimisation of the patient's health was done on out-patient basis, in conjunction with a physician. On the day of surgery, patients arrived nil per orally or with 6 hours fasting accordingly were scheduled for surgery.

All surgeries were performed under general anaesthesia. DVT Prophylaxis was given either if the surgical duration extended beyond 45 minutes or if patients presented with multiple co-morbidities. Post-surgery, patients were shifted back to post-operative ward and were under constant observation for a minimum period of 6 hours.

Post-operative analgesia included intravenous non-steroidal anti-inflammatory drugs (Inj. Paracetamol 1gm, Inj. Diclofenac 50mg +/- Inj. Ketorolac 10mg IM and opiods SOS). Visual Analogue Scale (VAS) was used for pain assessment. Incidence of post- operative nausea and vomiting (PONV) was also noted and treated. Early oral feeds and mobilisation under supervision were preferred, so as to reduce the incidence of DVT as well as to enable patients to be as active post discharge.

Patients were deemed fit for discharge once they achieved stable vitals, VAS score of <4, passed urine, tolerated orally and reported to have a responsible care-taker at home who was well informed and capable of identifying complications and seeking immediate medical attention. In case of patients choose to stay over or they require observation, they are shifted to the wards in the hospital for further care. Prior to discharge, patients as well the attenders are advised on the discharge medications, trained in wound and drain care as well as arm physiotherapy. Nutritionist advices on the diet. Nurse- oriented discharges are performed with intimation regarding the follow-up appointments. The emergency contact information of the consultant, discharging nurse, counsellor and the hospital management staff are provided with the discharge summary.

During the follow up visits they are noted for complications which are treated conservatively or with minor surgical interventions. Post – operative recovery and the duration of time taken to return to normal life is observed. Feedback from the patient and family was taken regarding the hospital facilities and stay, the day surgery plan and their overall satisfaction with the care and areas of improvement.

Results

Over the period of 2 years, 124 patients (9 men, 115 women) underwent breast surgeries at Apollo Spectra hospital, Bangalore. Baseline demographic characteristics are presented in table 1. It was seen that 90% of the patients were working with a mean age of 35 years.

A total of 156 breasts were operated, 92 for unilateral disease and 32 for bilateral disease. The diseases were categorised into benign and malignant. Among the surgeries (Table 2) performed, lumpectomy was the highest (in 89 breasts) with wide excision (29 breasts) being the second most common. Breast conservative surgery was the cancer surgery of choice in our centre with only 8 cases requiring modified radical mastectomy given their advanced stage of presentation, among the 20 malignant breasts. A wide variety of breast conditions (Table 3) were operated of which fibroadenomas (39.1%) were the most common followed by acute mastitis (20.51%) in the benign category. Wound was closed almost always barring a few that were more infective in nature. They were left open for a few days and later on closed under local anaesthesia. Drain was inserted as and when required (mainly Romovac suction drain).

The average age of the patients in the benign category was 35 years and malignancy was 49 years. The mean duration of surgery was 63 minutes and hospital stay was 11.5 hours for benign cases whereas it was 100 minutes and 21.5 hours for malignancy surgeries, respectively. Mean post-operative VAS pain score measured at 4 hours was 3.97 in benign category and 4.75 in malignancy group. Majority of conditions were managed with IV non-steroidal anti-inflammatory drugs (NSAID's) only. No major post-operative events were observed and were prepared for discharge, However, 3 patients who presented with excessive drain output within 2 hours of surgery, were managed conservatively with IV fluids, Inj. Pause 1gm BD and tight compressive dressing.

The complications observed during follow up are presented in Table 4. Seroma /hematoma was seen in 2 patients and underwent lumpectomy. Drain complications were evaluated for dislodgement / extraction/ drain site infection/ need for reinsertion and it was seen that only one patient who underwent MRM needed re-anchoring of the drain to the skin. Re-admission was considered when the patient came in with a complaint not manageable at home and required hospitalisation post discharge. Only 1 patient post modified radical mastectomy came for severe pain at wound site 2 days post-surgery and was treated with IV antibiotics and analgesics.

Re-surgery had to be done in two patients in the benign category, as their HPE was suggestive of a malignant focus in the specimen, they underwent margin correction and were again discharged as a day care case.

Out of the 124 patients, 18 patients had a hospital stay of more than 24 hours. When evaluated, 8 of them were due to delay in the insurance approval, 5 were > 60 years who requested for an overnight hospital stay for psychological effect. 3 had a bilateral surgery with a VAS score of >4, hence retained for pain management. 2 patients were cases of mastitis that were retained to administer the doses of IV antibiotics given the degree of infection in them.

Based on the questionnaire, the overall experience by patients in malignant category was rated to be 9 and a 7.87 by the benign group (Table 3).

All patients returned to normal life immediately i.e. within 24 hours of discharge for benign cases and within 36-48 hours for malignancy. Before discharge, advice on being as active as possible, and encouragement regarding the range of activities that do not hamper their healing was given.

Discussion

In India, day care surgeries still constitute less than 15% among all surgical specialties [1].

This is in contrast to the west, where more than half of all general surgeries are performed as day care [2]. The percentage of day care surgeries in UK is around 50% while they constitute 60% of cases in USA [3, 4]. Glass *et al*. noted in his study that only high risk surgeries like umbilical hernia, transurethral prostate resection and haemorrhoidectomy are performed in lower percentage as day care surgeries [5].

Day care surgeries are revolutionising clinical practice. Breast surgeries as such does not restrict patients' daily activities. Even

with the presence of drain, patients can be discharged from hospital and mobilised well, preventing many complications associated with major surgeries. Early discharge after surgery poses a major challenge to the patient's mind set, requiring them to be confident of recovery outside a more controlled and specialised environment offered during a hospital stay. In agreement with previous report [6], when done in a centre well equipped to handle the patient care in a co-ordinated manner addressing all the issues regarding surgery, discharge and post-discharge homecare allows satisfactory outcome both patient wise and surgically.

By reviewing the previously published data and the technical difficulties encountered during in-patient care, a holistic approach to the concept enabled us to develop this protocol. Since the population catered in urban India is well educated and facilities are available for immediate contact, day care breast surgeries were implemented in our centre. Complete information regarding their disease, its natural course, how day care surgery plays a role and also how to handle the expected complications at home after surgery was provided to the patients and attenders in our setup.

Counsellors were aptly trained to take care of all the coordination required to fix up the dates, pre-operative work up, discharge and provide psychological and social comfort to the family. Additionally, various factors such as availability of all facilities in one building allowed quicker diagnosis and preparation without delay. Continuous monitoring by nurses and doctors with Operation theatres and post-op ward being side by side, ensures immediate action when required. In house anaesthesiologists manage the pain levels of patients, making them comfortable and more confident for an early discharge. This set-up therefore minimises post-operative complications.

In addition to above mentioned facilities at hospital, another key to the success of day care surgery is having a care-taker at home able to monitor patient's condition post discharge and seek immediate attention when necessary. All the patients were called in for a follow-up on post-operative day-5, and the complications encountered were quite minimal, wherein bleeding/ seroma/ hematoma was reported in only 5 patients and required mild interventions, well managed in OPD. Even the drain related complications were not profound in nature and was tackled easily with adequate guidance and approach.

A study from South India reporting day care surgeries in various type surgeries established a low rate of over all complication during follow-up (6.4%) without any mortality [7]. Similar findings was also reported by Ramyil *et al*. with significantly lesser complication in day scare surgeries compared to in-patients surgery [8].

Additionally, patients indicated a high level of satisfaction with day care surgery and experienced faster healing and recovery at home within the family milieu [9]. One of the foremost advantage of day care protocol is the significant decrease in cost incurred contributing to only 21% of the total care cost as compared with that of an overnight hospitalisation which is 40% higher [3].

Shorter stay also provides an opportunity to reduce the burden on health care and hospital, allowing the usage of same bed for multiple patients. This ensures optimisation of the available hospital resources [10].

This study is limited by a small sample size with a shorter duration of follow-up, along with the fact that the patients attending our setup were mostly from a mid-high socio-economic status, with good education and adequate access to facilities.

Table 1: Demographics and baseline characteristics of patients

Parameters	n
Number of patients	124
Total number of breast lesions operated	156
Unilateral	92
Bilateral	32
Females	115
Males	9

Table 2: Type of breast disorders

Breast disease	n=156	%
Acute mastitis	32	20.51
Axillary breast	4	2.58
Antibioma	1	0.64
Breast cyst	10	6.41
Carcinoma breast	14	8.98
Cystosarcoma phylloides	6	3.85
Duct ectasia+ papilloma	7	4.49
Fibroadenoma	61	39.1
Fistula	1	0.64
Fibrocystic disease	8	5.12
Galactocele	2	1.28
Granulomatous mastitis	8	5.12
Sebaceous cyst	1	0.64
Suspicious lump	1	0.64

Table 3: Post-operative parameters between groups

	Benign (n=104)	Malignant (n=20)
Age (in years)	35	49
Average duration of surgery (in min)	63	100
Average duration of hospital stay (in hrs)	12	21.5
Visual Analogue Scale score	3.97	4.75
Post- Operative Nausea & Vomiting	13.67%	18%

Table 4: Complications observed during follow up

Complications	Benign		Malignancy	
	n=104	%	n=20	%
Bleeding	1	0.96	2	10
Seroma/hematoma	2	1.92	1	5
SSI	1	0.96	1	5
Drain dislodgement	0	0	1	5
Re-intervention	3	2.88	2	10
Re-surgery	0	0	1	5
Re-admission	2	2.88	0	0

Table 5: Patient feedback survey

Parameters		Benign	Malignancy
Hospital facilities		8.5	9.0
Hospital care	Day of stay	7.5	8.0
	Post-discharge	8.0	9.5
Counselling & information		7.5	9.5
Overall satisfaction		7.8	9.0

Conclusion

Breast surgeries when performed at a well-integrated system of day care has great advantages as seen with the considerable cost reduction, effective hospital resource utilisation, acceptable post-operative outcome and a definite patient comfort and compliance. Future studies are required to assess the efficacy of this protocol for patients across all economic strata.

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