Patients' Perspective on Day Case Breast Surgery

Ruvinder Athwal   Mahmood Dakka   Donna Appleton   Simon Harries   Dayalan Clarke
Lucie Jones

General Surgery, Warwick Hospital, Warwick, UK

Keywords

Breast cancer · Mastectomy · Psychosocial distress · Supportive care

Summary

Background: This study assessed the views of patients undergoing breast surgery for breast cancer with a planned overnight stay, asking whether they would be happy to be discharged home on the same day of surgery. **Methods:** A structured questionnaire sent out in the 6 weeks following surgery was used to ascertain the patients' views. **Results:** The majority of patients undergoing mastectomy and axillary node clearance preferred an overnight stay, primarily for psychological reasons. **Conclusions:** Patients undergoing breast-conserving surgery were more prepared to go home on the day of surgery.

mobilisation [5]. Most women with breast cancer feel well and their surgery is not always extensive; because of this there has been a drive to perform more breast cancer surgery as day case procedures. Hence, whilst breast-conserving surgery (BCS) with or without sentinel lymph node biopsy (SLNB) is the ideal treatment group for day case surgery, mastectomy and/or axillary node clearance (ANC) is more controversial [1]. Certainly, studies in the literature have shown either equivalent or better outcomes for early discharge, but there is also evidence to suggest that patients can feel that discharge is being rushed and that they have not been given adequate time to recover [6–9]. Evaluation of breast cancer day surgery has focused mainly on the benefits for the hospital, looking at cost effectiveness and a quicker turnaround. There has been little published information on the patients' experience of breast cancer day surgery, but a recent paper suggests that day case breast surgery is adequate and safe although perhaps not optimal for patients [1]. The object of this study was to evaluate the views of our patients who currently stay overnight following mastectomy and/or ANC or ANC alone or BCS and ANC, by asking them whether they felt that discharge on the same day of surgery would have been acceptable to them.

Introduction

The use of day case breast surgery has been increasing steadily over the past decade within the UK [1]. In general, this entails the patient being admitted to hospital for a planned surgical procedure and being allowed to return home on the same day. Patient feedback suggests that day surgery has high levels of patient satisfaction [2, 3]. These studies have demonstrated that patient satisfaction can be optimised by achieving good post-operative pain control, a short waiting time before surgery, a patient-centred environment and follow-up by telephone on the following day [4]. The development of day case breast surgery has been in part fostered by significantly lower post-operative events, lower rates of post-operative pain, lower rates of nausea and vomiting and early

Methods

A patient questionnaire was devised and sent to patients who had been admitted overnight after their breast surgery during the 6-month period from December 2012 to May 2013. The questionnaire included 6 questions, and an abridged version of it is shown in Figure 1. The questionnaire was designed by the authors and given approval from the hospital board. It is based upon the questionnaire of McIntosh et al. [10]. The questionnaire was sent out to the patients within 6 weeks of surgery and was posted to their home address with a hospital-addressed pre-paid envelope. This included patients who had undergone mastectomy alone, mastectomy with ANC or BCS with ANC. The study was granted ethical approval from the local research ethics committee. As part of our local departmental protocol a consultant surgeon sees the patients pre-operatively and the breast care team, including the breast care nurses. The patient is counselled regarding the pre-operative histological find-

Fig. 1. Questionnaire used to assess patient satisfaction following breast surgery.

Fig. 2. Patients' opinions on whether an overnight stay following breast cancer surgery was useful. Numbers above columns represent percentages. * $p < 0.05$, Fisher's Exact test.

ings and the surgical procedure to be carried out. If the SLNB is positive on intra-operative assessment using one-step nucleic acid amplification (OSNA), necessitating an immediate ANC, and/or if patients undergo a mastectomy, they have an overnight admission. Patients undergoing BCS and/or SLNB were excluded from the study as these treatments are routinely performed as day case procedures.

The questionnaire consisted of questions covering the following key areas: whether their overnight stay was planned or not; whether they found their overnight admission useful and, if yes, their reasoning for this; whether the additional support of the breast care nurse on the following day was helpful; and whether they would have been happy to go home on the same day (Fig. 1).

In our unit, all breast cancer patients are admitted on the day of their surgery and the surgery is performed by 1 of 3 consultant breast surgeons. Some patients do not know that they are going to stay overnight until the result of the intra-operative assessment of the sentinel node by OSNA has been obtained. At the end of surgery, most patients had a long-acting local anaesthetic agent infiltrated into their wounds/drains. All patients had a suction drain placed in situ at the end of surgery and a review by the surgical team. The breast care nurses reviewed and counselled the patients regarding their mastectomy and/or their positive lymph node results on the following morning and prior to the patients being discharged. The following day, the patients also received a telephone call from the breast care nurse to ascertain any difficulties since discharge and for recording the drain output.

Statistical Analysis

The data assessed in this study involved exclusively binary variables. Where 2 variables were assessed, Fisher's exact test was performed. When 3 groups were compared, Fisher's exact test was performed on all 3 groups initially, with post-hoc tests used to ascertain the significant group. p values < 0.05 were considered as statistically significant.

Results

In total, 56 patients with a mean age of 57 years (range 42–73 years) were included in the study. These included patients who had undergone mastectomy with SLNB, mastectomy with ANC or BCS with ANC who had to stay overnight. Questionnaires were sent to all 56 patients. A total of 41 patients replied using the pre-paid envelope (73% response rate). Thus, the final patient group had a mean age of 55 years (range 42–68 years). The types of surgical procedure carried out in the 41 patients are shown in Table 1. 17 patients underwent mastectomy with concomitant ANC for invasive breast cancer, 14 patients underwent BCS with ANC for invasive disease and node positivity, and the remaining 10 patients un-

Table 1. Types of surgical procedure and planned overnight stay in patients undergoing mastectomy, mastectomy with ANC or BCS with ANC

	Number of patients, n (%)	Planned overnight stay, n (%)
Mastectomy ± SLNB	10 (24)	9 (90)
Mastectomy + ANC	17 (42)	17 (100)
BCS + ANC	14 (32)	4 (31)

Table 2. Reasons why patients found an overnight hospital stay useful

	Analgesia, n (%)	Reassurance, n (%)	Presence of drain, n (%)
Mastectomy ± SLNB	2 (20)	5 (50)	3 (40)
Mastectomy + ANC	4 (24)	12 (70)	4 (24)
BCS + ANC	3 (23)	8 (54)	7 (53)

Table 3. Patients' views regarding surgical drains following breast surgery

		Mastectomy ± SLNB, n (%)	Mastectomy + ANC, n (%)	BCS + ANC, n (%)
Informed	yes	9 (90)	14 (85)	11 (77)
patients going	no	1 (10)	3 (15)	3 (23)
home with drain				
Anxiety regarding	yes	4 (40)	6 (35)	7 (50)
drain				

derwent a mastectomy and SLNB for invasive disease and/or widespread ductal carcinoma in situ (DCIS). Table 1 also demonstrates that patients undergoing mastectomy and planned ANC surgery are well informed regarding the plan for them to stay overnight. The patients undergoing BCS and SLNB with intra-operative assessment and proceeding to an immediate clearance appear to be less informed.

The vast majority of our patients found the overnight stay in hospital following surgery useful, irrespective of the type of surgical procedure that had been performed (Fig. 2).

As Table 2 demonstrates, the main reasons as to why patients found an overnight stay useful were independent of surgical procedure-related factors. The main reason cited by patients for wanting an overnight stay was the reassurance of being within a hospital environment. Patients cited regular observations and the presence of a qualified nurse as being the main reasons for reassurance. In addition, many patients reported a lack of confidence in being discharged home with a surgical drain. Importantly, no patients reported significant nausea or vomiting, with a minority reporting that analgesia was the primary reason for wanting or requiring an overnight stay.

It is our normal and routine practice that all patients are informed about the possibility of being discharged home following surgery with a surgical drain in situ. Table 3 demonstrates that the vast majority of our patients remember that they had been told

about the possibility of a drain being in place upon discharge. However, despite our rigorous pre-operative counselling, a significant portion of our patients still expressed some degree of anxiety regarding the possible discharge with a surgical drain.

A vital adjunct to our patient management following breast surgery is early follow-up of the patient by a dedicated breast care nurse. The patients are initially seen the next morning after their breast cancer surgery. They are counselled regarding their breast surgery and/or their positive lymph node assessment results. After discharge, the breast care nurses also follow up the patients on the following day by telephone interview. As clearly illustrated by table 4 (online supplemental material, www.karger.com/?DOI=370207), all patients found this useful.

Finally, when the patients were asked whether they would have found discharge on the same day of surgery acceptable, the majority would not have found this appropriate (Fig. 3). The findings do suggest that patients undergoing BCS and ANC appear to be more inclined to be discharged home on the same day.

Discussion

Previous studies have suggested that BCS performed as a day case is feasible, safe and beneficial for patients [1]. Moreover, studies have suggested that this is also psychologically beneficial for the patients [1]. There is, however, a paucity of data with regard to the potential psychosocial effects of performing mastectomy as a day surgery procedure. In our unit there is also the additional factor of intra-operative assessment so that the patients are unsure of the extent of their disease and their subsequent surgery until it has happened. The resultant effect means that in many units such as our own patients undergoing mastectomy and/or axillary surgery are kept overnight following surgery. Furthermore, the lack of a full understanding of the psychology of patients undergoing mastectomy needs to be addressed before such patients should be routinely offered day surgery.

Clearly, taking care of a breast cancer patient involves adopting a holistic approach encompassing the surgical procedure, emotional support, counselling and information for the patient regarding their disease and its management. As inpatients, women receive support from the surgical team, the breast care nurse and the ward nurses, and also interact with other breast cancer patients. This may in part explain why such a large proportion of our patients were happy to have an overnight stay in hospital when questioned after discharge. Indeed only very few patients required increased doses of analgesia. Moreover, traditionally, post-operative nausea and vomiting have been relative contraindications to day surgery. However, in accordance with previous studies, we corroborate that this can be adequately controlled in the post-operative phase and does not impact upon the patients [11]. This suggests that, although mastectomy and axillary surgery can be performed as day cases with low post-operative analgesia, patients will not attain the support and information offered to them within the hospital environment [12]. In addition, our study further sug-

Question 1. What did your breast surgery include (please tick all that apply)?

- mastectomy ☐
- wide local excision ☐
- removal of axillary lymph nodes ☐

Question 2. Was your hospital overnight stay (please tick one only)

- planned ☐
- dependent upon results of lymph node assessment ☐

Question 3. Was your overnight stay in hospital helpful?

- Yes, go to Question 3A ☐
- No, go to Question 3B ☐

Question 3A) If yes, please give your reasons (please tick all that apply)

- Required strong pain relief ☐
- reassurance (i.e. being observed by a qualified nurse) ☐
- lack of confidence (i.e. being discharged so soon with drain in-situ) ☐
- other (please specify) ☐

Question 3B) If no, please give your reasons (please tick all that apply)

- No strong pain relief required ☐
- poor quality of sleep ☐
- preferred to be at home ☐
- other (please specify) ☐

Question 4. Were you informed you might go home with a drain in situ?

- Yes, go to Question 4A ☐
- No, go to Question 5 ☐

Question 4A. if yes, did this cause you anxiety? Yes ☐ No ☐

Question 5. The following morning, did you receive a consultation with the breast care nurse?

- Yes, go to Question 5A
- No, go to Question 6

Question 5A. if yes, was this helpful? Yes ☐ No ☐

Question 6. In some breast units elsewhere in the country, patients having undergone similar breast surgery would have been discharged on the same evening following surgery. If this option had been available at the time of your surgery, do you think you would have chosen it?

- Yes ☐
- No ☐

Please give your reasons

Fig. 3. Patients' opinions on discharge on the same day as surgery.

gests that patient anxiety after surgery is better addressed within the hospital environment despite comprehensive pre-operative education for the patients. Although studies have suggested that day surgery has improved with psychological and emotional adjustments after surgery [13], our study suggests that early discharge may be detrimental to the patients. Specifically, the management of surgical drains caused considerable anxiety among our patient cohort. Clearly, even despite our rigorous pre-operative counselling, the patients expressed anxiety and concerns about being discharged home with a surgical drain in situ. This may in part also explain the reassurance expressed by patients in a hospital environment. Although discharging patients with a surgical drain is a feasible option, it is clear that patients require further education and support within the community if this is to be achieved [7, 8]. Hence, the additional time spent in hospital does appear to offer patients reassurance and the confidence to manage

a surgical drain at home. The need for additional reassurance is shown by the excellent support the patients felt they received from the breast care nurses. Indeed, all our patients universally endorsed breast care nurse consultation.

Finally, our findings reflect those reported by Margolese et al. [13], where 40% of the day surgery patients said that they would have wanted 1 night in hospital and only 11% of the inpatients would have wanted day surgery instead. Upon reflection, the majority of our patients still wanted 1 night in hospital after surgery, mainly for factors independent of surgery. Again, this reiterates the importance of allaying patient expectation and concerns with surgical care pathways and protocols. Whilst pre-operative education of patients using various modalities may ensure the promotion and success of day surgery mastectomy [14–16], by failing to recognise patients concerns and expectations day surgery will not gain patient endorsement.

Some other authors have also expressed concerns regarding day surgery mastectomy. Specifically, day surgery may potentially hinder the patients' ability to cope with their cancer diagnosis and patients would not be afforded the same level of support that inpatients would get [17]. These are clearly important concerns, and even with the advent of optimised patient education and pre-operative counselling, many of these concerns may not be allayed. Clearly, as supported by our study, there is an important role for post-operative inpatient management after breast cancer surgery. The reported study has clearly shown the patients' perspective on day case breast surgery. However, there are some weaknesses inherent in our study. It is retrospective and, hence, liable to recall bias. Furthermore, less of the elderly patients responded to the questionnaire, thus clearly influencing the overall results. The findings here need to be fully assessed in a larger randomised study conducted in a prospective manner.

In conclusion, our study illustrates that, after breast cancer surgery, patients are reassured and find confidence in the hospital environment. We suggest that 1 overnight stay after breast surgery improves the patients' satisfaction and that 1 night stay should not always be seen as a failure of care.

Disclosure Statement

The authors have no conflict of interest to declare.

Online Supplemental Table

Table 4. Patient opinions on breast care nurse consultation

To access the online supplemental material please refer to www.karger.com/?DOI=370207.

References

- 1 Marla S, Stallard S: Systematic review of day surgery for breast cancer. *Int J Surg* 2009;7:318–323.
- 2 Bain J, Kelly H, Snadden D, Staines H: Day surgery in Scotland: patient satisfaction and outcomes. *Qual Health Care* 1999;8:86–91.
- 3 Lau H, Poon J, Lee F: Patient satisfaction after ambulatory inguinal hernia repair in Hong Kong. *Ambul Surg* 2000;8:115–118.
- 4 McHugh GA, Thoms GM: The management of pain following day-case surgery. *Anaesthesia* 2002;57:270–275.
- 5 Canet J, Raeder J, Rasmussen LS, Enlund M, Kuipers HM, Hanning CD, Jolles J, Korttila K, Siersma VD, Dodds C, et al.: Cognitive dysfunction after minor surgery in the elderly. *Acta Anaesthesiol Scand* 2003;47:1204–1210.
- 6 Bonnema J, van Wersch AM, van Geel AN, Pruyn JF, Schmitz PI, Paul MA, Wiggers T: Medical and psychosocial effects of early discharge after surgery for breast cancer: randomised trial. *BMJ* 1998;316:1267–1271.
- 7 Bundred N, Maguire P, Reynolds J, Grimshaw J, Morris J, Thomson L, Barr L, Baidam A: Randomised controlled trial of effects of early discharge after surgery for breast cancer. *BMJ* 1998;317:1275–1279.
- 8 Purushotham AD, McLatchie E, Young D, George WD, Stallard S, Doughty J, Brown DC, Farish C, Walker A, Millar K, et al.: Randomized clinical trial of no wound drains and early discharge in the treatment of women with breast cancer. *Br J Surg* 2002;89:286–292.
- 9 Bonnema J, van Wersch AM, van Geel AN, Pruyn JF, Schmitz PI, Uyl-de Groot CA, Wiggers T: Cost of care in a randomised trial of early hospital discharge after surgery for breast cancer. *Eur J Cancer* 1998;34:2015–2020.
- 10 McIntosh J, Fide CJ, Fowler CA: Patient satisfaction with nurse-led follow-up for breast cancer: a questionnaire study. *Breast J* 2011;17:213–214.
- 11 Gan TJ, Meyer TA, Apfel CC, Chung F, Davis PJ, Habib AS, Hooper VD, Kovac AL, Kranke P, Myles P, et al.: Society for Ambulatory Anesthesia guidelines for the management of postoperative nausea and vomiting. *Anesth Analg* 2007;105:1615–1628.
- 12 Cassinotti E, Colombo EM, Di Giuseppe M, Rovera F, Dionigi G, Boni L: Current indications for laparoscopy in day-case surgery. *Int J Surg* 2008;6(suppl 1):S93–S96.
- 13 Margoless RG, Lasry JC: Ambulatory surgery for breast cancer patients. *Ann Surg Oncol* 2000;7:181–187.
- 14 Dravet F, Belloin J, Dupre PF, Francois T, Robard S, Theard JL, Classe JM: [Role of outpatient surgery in breast surgery. Prospective feasibility study]. *Ann Chir* 2000;125:668–676.
- 15 Marchal F, Dravet F, Classe JM, Campion L, Francois T, Labbe D, Robard S, Theard JL, Pioud R: Post-operative care and patient satisfaction after ambulatory surgery for breast cancer patients. *Eur J Surg Oncol* 2005;31:495–499.
- 16 McManus SA, Topp DA, Hopkins C: Advantages of outpatient breast surgery. *Am Surg* 1994;60:967–970.
- 17 Josefsen D: 'Drive by' mastectomies to be banned. *BMJ* 1997;314:92.