

Patient Reported Outcome Measure (PROMs) assessment of day case pain control post breast surgery - new treatment pathway.

Anne O'Neill
Ross Vanstone
Stephanie Jenkins

Derriford Hospital, University Hospitals Plymouth
Derriford Hospital, University Hospitals Plymouth
Derriford Hospital, University Hospitals Plymouth

Introduction

Day case surgery is an advancement in patient care and efficiency for hospitals.

The success of day surgery is dependent on the patient's experience of the pathway including pain control.

Patient Reported Outcomes Measures (PROMs) validates the success of treatment and the quality of care delivered to NHS patients from the patient's perspective.

Method

All patients undergoing day case breast surgery were assessed using PROMS to validate the surgical pathway with respect to pain control.

Patients were requested in advance to purchase simple over the counter analgesia to take according to their own requirements and hospital prescribed discharge analgesia was discontinued.

Results

Nearly all patients felt that their pain control immediately after surgery was good.

18.3% patients recorded that the pain kept them awake at night and 14.8% felt they needed stronger pain relief.

Importantly only 8.3% sought medical help post discharge and just 3.5% sought help from GPs for any reason.

Eight patients stayed overnight for medical reasons and stated that this was a necessary and acceptable outcome in the circumstances.

24.8% patients experienced some form of post operative issue.

Despite these experiences 95% stated they preferred having day case surgery.

Discussion

PROMS allows patient feedback of the treatment pathway and enables reflection and further improvement to be achieved.

The results support discontinuation of medication on discharge and patient self-medication with over-the-counter analgesia is an acceptable pathway. It does not result in a significant burden on GP or A+E with patients seeking pain relief from other sources.

Aim

Patients undergoing day case breast surgery were assessed using PROMs to validate the surgical pathway with respect to pain control.

Introduction

Day case surgery is an advancement in patient care and efficiency for hospitals due to improved techniques in anaesthetic care, surgical operative procedures, and post-operative pain control. (1)

Operations such as breast surgery lends itself to day case surgery due to shorter duration of surgery, less surgical pain, the surgery is superficial to body cavities, improved haemostasis and reduced need for drains. Also improved use of supplementary local anaesthesia and regional blocks reduces the duration of anaesthesia and this leads to improves post op outcomes. (1)

The success of day surgery is dependent on the patient's experience of the pathway. (2)

Patient reported outcomes (PROMs) measures the success of treatment and the quality of care delivered to NHS patients from the patient's perspective. (2)

The usefulness of PROMs is dependent on the questions asked and the "comments box" that encourages any other patient related incidences to be conveyed.

PROMs were used in this study to assess the day case treatment pathway with respect to post operative pain control in breast surgery patients.

Pain control is important for successful rehabilitation post-surgery.

If pain is poorly controlled then reduction in mobility causes distress and, the reduction in mobility per se increases the risk of complications such as Pulmonary Emboli, Deep Vein Thrombosis and Respiratory Tract Infections.

Pain is also a common reason to seek help from GPs, NHS 111, and Pharmacists putting extra strain on already stretched resources.

If too much analgesia, then side effects occur such as drowsiness, post op nausea or vomiting (PON/V), dizziness, constipation, and falls.

Traditionally post operation analgesia is prescribed according to the WHO (World Health Organisation 1996) analgesic ladder for mild to moderate pain (3). It is routinely prescribed for day case surgical patients on discharge or by providing ward discharge packs. Figure.1

It was noted from patient feedback that routine prescription of analgesic tablets to take home (TTAs) provided wastage as the analgesia prescribed was already available at home or purchased cheaper over the counter if necessary.

Hence all patients were encouraged to provide their own choice of analgesia to take post operative

and hospital prescribed discharge analgesia was discontinued.

PROMs were used to validate the treatment pathway with respect to self-medicated post operative pain control in breast surgery day case patients.

Method

All adult patients undergoing day case breast surgery at Derriford NHS Hospital, Plymouth were requested in advance, during outpatient result clinic and in pre-admission clinic, to purchase simple over-the-counter analgesia (including non -steroidal analgesia if tolerant) to take according to their own requirements and personal preference, or to use readily available analgesia stocked at home.

Advice was provided in clinic on the level of analgesia that might be required post operatively according to the WHO analgesic ladder for mild to moderate pain and the suitable medication that could be purchased so, hospital prescribed discharge analgesia was discontinued. (3) Figure 1.

We excluded paediatrics, reconstruction surgery and patients with planned inpatient stay as they have a different discharge pathway. Patients that were unable to purchase simple analgesia or unable to comply with self-medication were also excluded.

Implementation of a text follow-up system involved the discharge nurse inputting the patient's details into the Newcastle patient reported outcome measures system (Newcastle PROMS). (4,5)

If the patient did not have a smart phone the number of a relative or friend was requested to enable the questionnaire to be completed by them on behalf of the patient.

Inputting the patient's details triggered a text message to be sent post-surgery at 18:00 the day after surgery and if no response another at 12:00 on day two after surgery.

The text message contained a link to an online questionnaire and a link to advice leaflets on common postoperative complications on the Royal College of Anaesthetists (RCA) website. (6)

The questions asked in the questionnaire are shown in Table 1.

Results

Patients were enrolled having breast surgery through a dedicated day case surgery ward which also provided a 23 hour stay if medically requested/required. All surgery on the breast and axilla were included in the study except breast reconstructions.

Completed responses were received from 230 adult patients post breast surgery. Table 1.

Response rate was dependent on nurses' input of data and patient compliance with responding. (4)

Patients undergoing inpatient stay, unable to self-provide simple analgesia, suffering dementia, with chronic pain or requiring opioid use were excluded.

All patients acquired their own medication as requested according to the standardised guidance provided in clinic pre-operatively and it was checked on discharge by the breast care nurse specialist.

Of the 230 patients enrolled, 13 (5.6%) patients were booked as a 23 hour stay due to planned late surgery, compared to 217 patients (94.4%) which were true same day surgery breast cases i.e., post-surgery anticipated discharge.

Responses were obtained for all anaesthetic procedures applied intra operatively.

Anaesthetic type was predominately simple general anaesthetic and local anaesthesia applied intra-operatively (94.3%), general anaesthesia with some regional anaesthesia combination (2.2%) or solely regional blocks (0.9%) and some solely local anaesthesia (2.6%)

Nearly all patients felt that their pain control during surgery and immediately after surgery was good including those subjected to either solely regional blocks or local anaesthesia.

Post operative side effects were surprisingly common and occurred in 133/222 patients undergoing a general anaesthetic (59.9%). Symptoms included predominantly sore throats (42.8%) and postoperative nausea/vomiting (33.8%) plus dizziness (13.5%), shivering (6.7%) confusion/memory impairment (1.3%) and oral damage (0.4%)

As this was a primary study of analgesic control antiemetics were not prescribed routinely.

97.4% patients (224) felt that the pain was well controlled since having left hospital.

18.3% patients (42) recorded that the pain kept them awake at night and 34 patients (14.8%) felt they should have been discharged with stronger pain relief.

Conversely 85.2% of patients felt that they had not required stronger pain relief to have been prescribed on discharge.

19 patients (8.3%) had sought medical help for pain or another reason post discharge. 55.6% of these from their surgical team and 44.4% from their GP i.e., only 3.5% of all breast surgery day case patients post discharge sought help from their GP for any reason.

The majority rated the service as good or very good and only one patient rated it as poor but there no data to support/justify this result.

Eight patients (3.7%) booked as a planned day case surgical procedure stayed overnight for medical reasons - 2 lateness of surgery, 4 anaesthetic issues and 2 wound issues.

Since leaving hospital 24.8% patients experienced some form of recognisable post op issue e.g., vomiting (5.3%), nausea (82.5%) and wound issue (12.3%)

Despite these experiences 95% stated they preferred having day case breast surgery

Discussion

Responses included all planned day case breast surgery plus those who underwent a 23 hour stay as they were processed by the same day case surgery ward staff. (1)

Preoperatively breast surgery patients were encouraged to purchase analgesic medication over the counter which allowed them to seek out medication of their own choice. It enabled them to select analgesic brands that they tolerated and empowered the patient to self-medicate. The frequency and dosage could then be adjusted to manage their own pain threshold level. Patients were advised on the variety of medication they could purchase and utilise as per the analgesic ladder for mild-moderate pain. (3)

Patients being forewarned in clinics and preadmission provided time to access suitability, those not suitable were prescribed analgesia required post operatively and excluded from the study.

Pain control for breast day case surgery is mostly mild-moderate on the WHO analgesic ladder (3).

Most of these simple analgesics are readily available to patients over the counter and are used routinely for dental work and headaches etc to which the patient is familiar with both in dosage, frequency, side effects and personal tolerance and this ensures compliance with the study.

Many patients already have their “favourite” brands at home and do not request nor require further to be prescribed as supported by the results of 85.2% of the patients in this pathway.

Prescribing unnecessary analgesia delays discharged, cost time and is a financial burden to hospitals and the patients.

Many patients complain about delays in discharge due to unnecessary analgesic prescription for drugs they already had at home and could obtain cheaper directly from over the counter. Furthermore, many prefer their own brand due to side effects /intolerance of generic tablets. Noting this we discussed with patients in the clinic the plan to discontinue prescribing hospital drugs that were available over the counter on the understanding that patients would purchase their preferred analgesia in advance to surgery. Any concerns by patients or staff that compliance with self-medication was not suitable or the ability to purchase simple analgesia preoperatively was not possible, excluded the patient from the study and they received hospital prescribed analgesia as per normal discharge pathway. (1) Patient selection of suitability and education helped enable successful implementation of such treatment pathway.

Concerns were raised by colleagues that if the hospital discontinued prescribing analgesia the patient would struggle with pain management, run into problems with over dosage and side effects which would put pressure on GPs, A+E, NHS 111 or local pharmacy. This was not supported by the results obtained from this study - only 8.3% sought medical help for pain or another reason and only 3.5% from GPs which may have been because all patients are contacted day one post op by our Breast Care Nurses (BCNs) as per guidelines for day case surgery. (1)

Although 97.4% patients reported pain was well controlled on discharge, the question relating to “pain that kept them awake at night” provides a true insight into the level of control experienced in the first 24 hours, and whether the level of control was adequately managed by self-medication, of which 85.2% responded that felt they did not require stronger pain control to be prescribed.

Although 42 were kept awake at night, only 34 felt they should have stronger pain relief prescribed and therefore, 8 either were able to manage sufficiently with what was available to them, or naturally expected interrupted sleep to occur and therefore did not feel it was detrimental to their care.

This number may be improved if patients were encouraged to take regular analgesia throughout the night to prevent break through pain.

Although 14.8% reported that they would have liked stronger pain relief, if this were provided it would not necessarily lead to better pain control and might have increased the opioid related side effects e.g., constipation, confusion, increased falls etc.

Concerns raised that this pathway would lead to increase burden on GP/ A+E was not supported as only 3.5% sought GP help for any reason not just pain control. To combat this risk with this pathway, the breast care nurses rang patients at 24hours to ensure their analgesia was sufficient, and if not, patients would be invited to attend the unit for prescription of escalated analgesia if required.

All patients have a BCN follow up phone consultation 24 hours post-surgery as per Association of Anaesthetist and the British Association of Day Surgery (BADSD) guidelines 2019 (1) and hence, most concerns (55.6%) were dealt with by their surgical team -this included wound issues, drains, exercise instructions, as well as pain and post op anaesthetic issues.

Eight patients despite planned as day cases surgery were required to stay overnight for medical reasons and were still within 23 hours discharge so remained within the study.

This admission rate is to be expected with same day surgery and needs to be incorporated into hospital planning especially as population increases in age and the expectation of surgery being offered to increasing aged patients with increasing comorbidity and frailty to reduce bed pressures.

With drives to discharge patients immediately after surgery, patients need to be warned of protracted post operative symptoms such as sore throats and PON/V and the need for accompanying support for travelling home. Previous studies demonstrate similar levels of prevalence to ours, although the sore throat rate was higher at 42.8% (vs 31%) and will be investigated via a QIP. (7)

Despite this 95% of patients preferred day case breast surgery and 85.2% preferred not to be prescribed additional analgesia to take home. This pathway was developed for patients that were willing to comply. Those not suitable will still need hospital discharge analgesia.

Conclusion

Our PROMs system demonstrated that self-medication with over-the-counter analgesia is acceptable to patients and did not cause significant burden on alternative healthcare providers. The results of this study support discontinuation of hospital prescribed medication on discharge.

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Question	Possible Answers	GA	LA	RA	GA/RA
What type of anaesthetic did you have?					
		217	6	2	5
How well was your pain controlled right after surgery ?	Very good	150	4	2	2
	Good	46	1		3
	Ok	16	1		
	Bad	1			
	Response omitted	4			
Did pain keep you awake overnight?	Yes	42			
	No	182			
	Response omitted	6			
Did you have any side effects ?	PO N/V	45			
	Shivering	9			
	Sore throat	57			
	Dizzy	18			
	Confusion	3			
	Oral damage	1			
Were you	Yes	0	6	2	0

comfortable during surgery?					
	No				
How well was your pain controlled since you left hospital?	Very good	98			
	Good	75			
	Ok	59			
	Bad	6			
	Response omitted	1			
Should we have discharged you with stronger pain relief?	Yes	34			
	No	194			
	Response omitted	2			
Have you had to seek medical help for pain or another reason?	Yes	19			
	No	209			
	Response omitted	2			
Who did you seek medical help from?	My Surgical Team	10			
	GP	8			
	Response omitted	1			
Since leaving hospital have you had any of the following?	Post DC -Vomiting	3			
	Post DC - Nausea	47			
	Post DC - wound	7			
Overall, how was your experience of our service?	Very good	183			
	Good	39			
	Ok	4			
	Bad	1			
Did you leave hospital on the same day as your surgery?	Yes	207			
	No	8			
	Response Omitted	2			
Did you prefer having day case surgery?	Yes	190			
	No	11			
	Response omitted	16			
	23Hr excluded	13			

Table 1. Table 1. PROMs Questionnaire and Responses.



Figure 1. Figure. 1 World Health Organisation analgesic ladder 1996

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