

Patients' experiences of day surgery—an approach to quality control

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Abstract

Patients' experiences are recognised as the focus of quality assurance in day surgery. One method of following up patients' outcomes and satisfaction is by telephone interview. A prospective survey was made of 217 randomly selected day surgery patients. A total of ten patients of the original study group were admitted to hospital and four were not reached by phone. The survey was completed with 203 patients. Of these, 11.3% (23.3% after general and 6.8% after spinal anaesthesia) had experienced nausea either at hospital, on their way home or at home. After discharge, 10.3% of the patients had experienced no pain but 4.5% rated their average pain very severe. At the time of the interview 31% had no pain, but three patients still rated their pain as very severe. A total of 2.3% of the spinal anaesthesia patients needed a blood patch and 10.6% spontaneously reported having experienced pain in the lower limbs or back. During the first 24 h after discharge, most of the patients felt well with only slight discomfort after the different anaesthetic techniques. A total of 90% were very pleased and 10% fairly pleased with their day surgery experience. None of the patients were dissatisfied. © 1999 Elsevier Science B.V. All rights reserved.

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1. Introduction

Day surgery has gained wide popularity during the last few years. The patients are followed carefully during their stay in hospital, and pain and nausea are treated promptly according to the hospital routines. Normally, these patients are referred to health centres or to their own doctors for postoperative visits and do not come back to the operating hospital if there are no major complications related to the surgery or anaesthesia. Hence, the operating unit usually does not know how the patients manage after they leave the hospital. Yet patients' experiences are recognised as one of the main focuses of quality assurance in day surgery. The day surgery unit should monitor constantly patients' welfare, satisfaction or dissatisfaction and record all the complications in order to improve future management and outcomes. One method of following up patients'

outcomes and satisfaction is by telephone interview. In units with a small number of daily operations, every patient can be contacted by phone the next day, but in a big unit routine interviews are seldom possible due to limited staff resources. Hence, we decided to make a survey to assess the quality of care and the patients' overall satisfaction with their day surgery in our unit.

2. Patients and methods

After approval by the Ethics Committee of the Medical Faculty, University of Oulu, the study was carried out as a prospective survey of the incidence of postoperative nausea, vomiting, pain, complications and patients' satisfaction with their day surgery experience. A total of 217 patients scheduled for day surgery were randomly selected as a study population. After consent by the patients, a detailed chart of the pre-operative history and the events in the operating theatre and recovery room was filled in by anaesthesia nurses. A

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telephone interview was made by the anaesthesiologist on the following day. In the preoperative interview the patients were asked about their smoking habits, history of motion sickness and migraine and previous postoperative nausea after both general and regional anaesthesia.

Patients were not premedicated and no prophylactic antiemetic medication was given. During a 2-h period after the operation, the occurrence and intensity of nausea, vomiting and pain medication were recorded. Nausea was evaluated by the patient's subjective sensation of feeling sick or wanting to vomit. Emetic episodes were recorded separately as retching or vomiting. The average postoperative sedation during the assessment period was evaluated by the recovery room nurses using a five point rating scale (1, fully awake, 2, sleepy, 3, mostly awake, 4 sleeping but waking up and 5 as unconscious).

On the following day, the patients were asked to ascertain their nausea after leaving the unit by using an 11-point rating scale (0, no nausea; 10, worst possible nausea) and report the number of emetic episodes. The patients were asked to define whether the nausea was associated with travelling home, movement in general, oral intake of liquid or food, pain medication, or if it occurred without any precipitating factor.

The intensity of pain was evaluated as an average during the 24-h period and also at the time of the interview on an 11-point rating scale (0, no pain, 10 worst pain imaginable). The use of pain medication was recorded.

The patients were also asked whether they had a headache or any other untoward symptom after discharge. The overall satisfaction with the day surgery experience (operation, anaesthesia and aftercare) was expressed as dissatisfied, fairly pleased or very pleased.

3. Results

A total of ten patients (4.6%) of the original study group were admitted to hospital: five due to more extensive surgery than planned, four due to excessive pain and one due to cardiac arrhythmia. Four patients were not reached by phone. Thus, the survey was completed with 203 patients (Table 1), of whom 65%

Table 1
Patient characteristics

Males/females (%)	46.3/53.7
Age (years), median (range)	41 (16–57)
ASA physical status (%)	
1	85.7
2	12.3
3	2.0

Table 2

The incidence of nausea predicting factors among patients having or not having nausea and emesis (%)

	Nausea/emesis (<i>n</i> = 23)	No nausea (<i>n</i> = 180)
Current daily smoking	26	32
Migraine	43	21
History of motion sickness	52	34
PONV after previous general anaesthesia	26	28
PONV after previous regional anaesthesia	13	6

had orthopaedic lower limb surgery, 11% hand surgery and 24% general surgery. The anaesthetic technique was spinal in 65%, general in 21%, intravenous regional in 10%, and brachial plexus, epidural or local infiltration in 4%. The course of anaesthesia was uneventful in all cases.

During the 2 h in the recovery room, 99% of the patients were alert and awake, scoring 1 while only one patient scored 2 and one scored 3. During this period, nausea was experienced by 6.4% of all patients and one patient vomited once. A total of three patients were treated with antiemetics. After discharge, 12 patients (6%) experienced nausea, associated variably with movement, oral intake of food or fluids or pain medication. None of the patients had severe nausea (four patients scored their nausea as five, and eight patients as one to four). One patient took antiemetic medication at home. Of all the patients, 11.3% (23.3% after general and 6.8% after spinal anaesthesia) had experienced nausea either at hospital, on their way to home or at home. The percentage of patients who were regular smokers, who had a history of migraine or motion sickness or who had had nausea or vomiting after previous general or regional anaesthesia among the patients having no nausea or vomiting and those having nausea and/or vomiting are shown in Table 2.

Most of the patients (60.6%) received non-steroidal anti-inflammatory drugs (NSAIDs) as their sole pain medication in the recovery room, while 29.6% got a combination of codeine and paracetamol and 4.4% parenteral opioids and 5.4% had no pain medication.

The overall pain score after discharge was 4.1 ± 2.6 . The distribution of overall pain is shown in Fig. 1. A total of 21 patients (10.3%) experienced no pain and ten patients (4.5%) rated their average pain as very severe (scores 9 or 10). At the time of the interview the mean reported pain score was 2.4 ± 2.3 . The distribution of pain is shown in Fig. 2. The number of patients having no pain was 63 (31%), whereas three patients still rated their pain as very severe.

One third of the patients had taken no pain medication, two thirds had taken one to three tablets, and

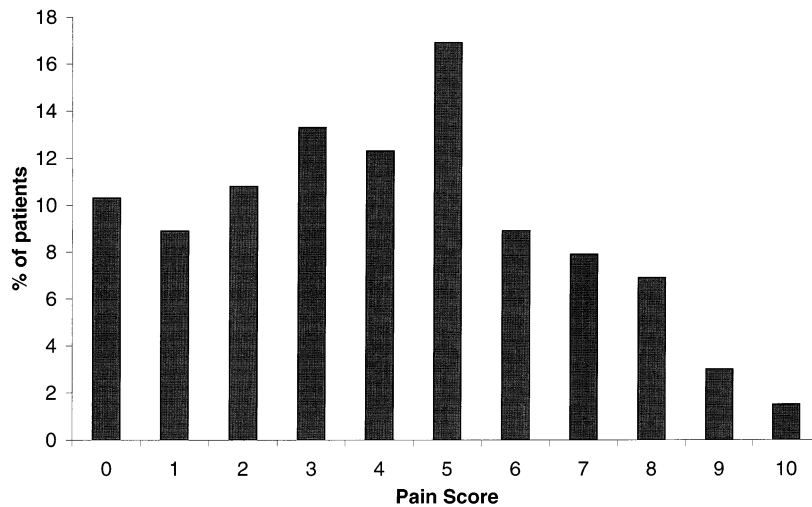


Fig. 1. The distribution of overall pain after discharge.

10.9% had needed more than three tablets of painkillers, mostly oral NSAIDs or paracetamol. Only 25 patients had taken oral opioids, mainly codeine combined with paracetamol.

Altogether 27 patients had experienced headache after discharge, 22 of them after spinal anaesthesia. Only three women aged 37–45 years (2.3% of the spinal anaesthesia patients) needed a blood patch. Lower limb or back pain was spontaneously reported by 14 (10.6%) spinal anaesthesia patients. Of these, eight had received mepivacaine, five lidocaine and one bupivacaine blockade. A total of six patients (three after GA, two after spinal anaesthesia and one after intravenous blockade) complained of having a sore throat. The percentage of patients having any discomfort (back and/or lower extremity pain, headache, nausea and/or vomiting or a sore throat) was 31.8% among the spinal patients and 30.2% among the general anaesthesia patients.

A total of 182 patients were very pleased and 21 fairly pleased with their day surgery experience. None of the patients were dissatisfied.

4. Discussion

In our survey, the number of unexpected hospital admissions was higher than in some earlier studies [1,2]. The fact that one third of our ambulatory patients come as direct referrals and see both their surgeon and the anaesthetist for the first time on the operating day may increase the number of cases needing hospital admission due to more extensive surgery than planned on the basis of the referral note. The long distances (up to 250 kilometres) our patients have to travel to hospital may also increase the need to stay at the hospital in the presence of even mild to moderate pain.

The total frequency and severity of nausea in this survey was lower than an earlier survey among inpatients at the same hospital [3]. This difference is probably due to the high number of orthopaedic cases operated on under regional anaesthesia producing a lower incidence of nausea [4] and the limited use of parenteral opioids for post operative pain relief. The number of hospital admissions due to nausea and the occurrence of nausea requiring medical intervention was also lower than in the study of Green et al. [5], where outpatients were randomised into different general anaesthesia groups. The reason for this difference is that some predisposing factors had obviously been taken into account when deciding on the method of anaesthesia in our survey, showing one aspect of good quality in anaesthesia care. This survey again revealed the known fact [6] that patients with a history of migraine and motion sickness have an increased tendency towards postoperative nausea or vomiting.

Even with the mean overall pain score being acceptable, excessive pain occasionally contributed to an unexpected hospital stay and some patients rated their pain as very severe even at home. This indicates that our pain relief needs improvement. As most of our case were arthroscopies, the use of intra-articular morphine [7] could be one solution.

The incidence of postspinal headache was relatively low, judged by the number of patients needing a blood patch, but a more detailed analysis of all headache cases would probably increase the total incidence and indicate the use of special spinal needles instead of our 27 gauge conventional needle.

Postoperative back pain is a common complication after spinal anaesthesia [8,9], but recent reports [10–12] suggest the pain in the lower back, hips and lower extremities to be a sign of transient neurological toxicity from intrathecal local anaesthetics. The high inci-

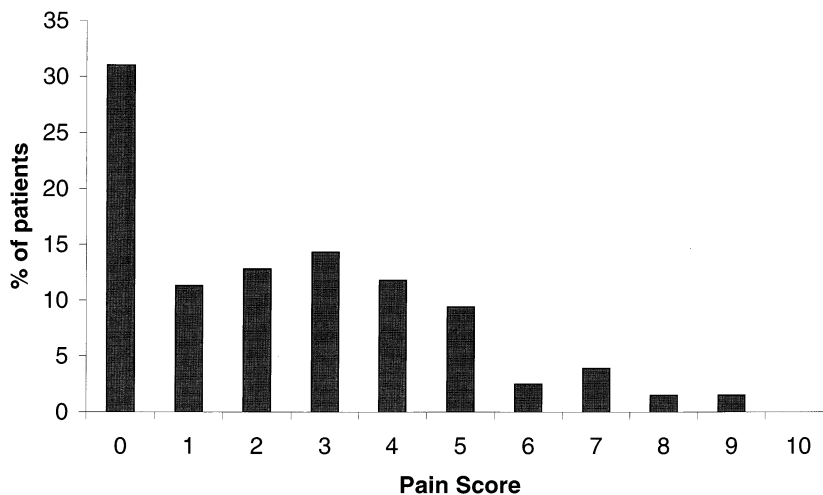


Fig. 2. The distribution of pain at the time of the interview.

dence of these pains in our survey might be due to the use of 5% heavy lidocaine in doses up to 100 mg.

5. Conclusions and clinical implications

Our high admission rate warrants further evaluation, especially of the cost effectiveness of direct referrals.

During the first 24 h after discharge, most of the patients were pleased and feeling well with only slight discomfort after the different anaesthetic techniques. The findings indicate that the occurrence of nausea and particularly vomiting was low among our ambulatory patients and did not cause any hospital admissions. Thus, routine antiemetic prophylaxis would not be cost-effective, but could well be considered in the presence of predisposing factors, such as a history of emesis and motion sickness, to improve the quality of recovery among these patients.

After discovering the high incidence of back and lower extremity pain, we reduced the dose of lidocaine (maximum 60 mg) and are exploring the possibility of replacing lidocaine with bupivacaine solution.

As the overall incidence of complications and patient satisfaction was independent of the type of anaesthesia, the anaesthetist may also choose the anaesthetic technique in view of considerations that may enhance rapid turn-over of patients in the unit. Still, a further evaluation of postoperative pain treatment is necessary. As no correlation was found between the type of operation and severe pain at home, the provision of analgesics and unambiguous instructions for their use at home are a crucial factor for all patients.

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