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Short Report

Adequacy of postoperative pain relief after discharge

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Abstract

Day care surgery has shown a remarkable development over the last two decades, comprising approximately 60-70% of all surgical procedures. Therefore major proportions of surgical patients are recovering at home and have little or no assessment of the adequacy of their pain relief. The aim of our audit was to compare suggested postoperative pain indicators with targets for best practice. This audit was done at the Aga Khan University Hospital day care unit for a period of three months. On the day of surgery patients having the contact numbers were informed about the telephone call 24 hrs after the surgery inquiring about their pain relief. Patients were shown and explained the visual analogue score from 0 to 10. The data was collected by one of the investigators on the day of surgery. We could assess 63.3% of day care patients. All patients were discharged with analgesia. Only three percent reported severe pain after 24 hrs which is according to the proposed standard for best practice that is < 5 %. Sixty percent of patients had mild or no pain which is less than the proposed standard (>85%) and 84.2% were satisfied which is almost borderline (>85%) according to the standard of best practice.

Introduction

The practice of day care surgery dates back more than 90 years, although it has only been over the last two decades that dramatic development is seen with marked increase in the number and complexity of procedures, comprising approximately 60-70% of all procedures. Therefore a major proportion of surgical patients will be recovering at home and have little or no assessment of their pain relief.¹

Some studies estimate that up to 75% of post

surgical patients experience pain because of under medication.² Patient's low expectation may well contribute to this problem. Studies³ have shown that 48% of patients take it as a part of healing and 39% see it as something to be endured. This may reduce the number of patients actually using the analgesics prescribed to them.

Despite many tools for providing analgesia, pain is still a common reason for delay in discharge, for contact with the family doctor⁴ and for unanticipated hospital admissions.⁵ Pain ranks in the top three undesirable postoperative outcomes⁶ and among the most common symptom of greatest concern for patients and their families.⁷

To treat pain effectively, it is important to understand the pattern of pain and define any predictive factors for severe postoperative pain. Chung and Mezei⁸ in their study identified risk factors for severe postoperative pain. They found that type and length of surgical procedures influence the incidence of postoperative symptoms.⁸ Given these factors, modifying the anaesthetic care to a protocol designed to reduce postoperative pain achieved measurable improvement in reducing pain.⁹ Developments in our understanding of the pathophysiology of acute pain have led to the concept of preventive analgesia (inhibition of physiological and pathophysiological secondary inflammatory pain). Therefore postoperative pain control should be started intraoperatively or, ideally, preoperatively to ensure a pain free recovery. The approach should be multimodal, using non-steroidal anti-inflammatory drugs (NSAIDs), opioids, and local anaesthetic techniques.¹⁰ NSAIDs in addition to providing effective analgesia provide their anti-inflammatory effects which may help reduce local oedema and minimize the use of opioids and their accompanying side effects. Consideration should be

Table 1. Pain Score.

	Before 24 hours		24 hours onward	
	No. of Pts	%	No. of Pts	%
Mild (1 - 3)	45	59.2	46	60.5
Moderate (4 - 7)	23	30	27	35.5
Severe (8 - 10)	8	10.5	3	3.9

Table 2. Satisfaction Score

	No. of Patients	%
Not Satisfied	12	15.7
Satisfied	64	84.2

given to the timing of NSAIDs. Orally they should be given preoperatively when the patient is awake. Even intravenously, NSAIDs take at least 30 minutes to be effective. Local anaesthetic wound infiltration and peripheral nerve block are simple, safe and an important part of the multimodal approach. Intracavity instillation of local anaesthetic is another simple and effective means of providing analgesics after laparoscopic and arthroscopic procedures.¹⁰ Opioids still remain the primary perioperative analgesic despite the association with nausea, vomiting and sedation, which may delay discharge. Postoperative pain in the PACU should be treated promptly with small doses of potent rapidly acting opioid analgesics. Claxton et al¹¹ found that equipotent doses of fentanyl and morphine provided a more sustained analgesic effect but caused of more nausea and vomiting after discharge as fentanyl is a short acting opioid and its use in the PACU should be accompanied by an oral drug to provide more prolonged pain relief.

The aim of our audit was to find the adequacy of postoperative pain relief after discharge. Our suggested indicators were:

Percentage of

- * Patients discharged with analgesics.
- * Patients with verbal pain score of severe in the first 48 hours after discharge.
- * Patients achieving a verbal pain score of mild or none with medication after discharge.
- * Patients satisfied with management of their pain while at home.

Our targets for best practice were!:

- * 100% patients discharged with analgesics.
- * < 5% reporting 'severe' pain on verbal pain score in the first 48 hours after discharge.
- * >85% reporting no pain or mild pain after discharge (with medication)

- * >85% satisfied with management of their pain while at home.

Methods and Results

On the day of surgery, patients contactable on telephone were informed about the telephone call that one of the investigators would make 24 hours after the surgery asking questions about their postoperative pain. Patients were shown and explained the visual analogue score from 0 to 10. They were explained that 0 meant no pain and 10 meant worst possible pain and they were told to grade their level of pain from 0 to 10 depending upon the severity. We have taken the pain score 1-3 as mild, 4-7 as moderate and 7-10 as severe.

We included all patients above 14 years of age undergoing day care surgery. We excluded all patients who were admitted after surgery, patients who refused to participate, not having telephone access, mentally not capable to understand and having a language barrier.

Data for the day of surgery was collected by one of the investigators. Patients were called 24 hours after the surgery by one of the investigators and data was collected. Data collected on the day care surgery included contact number, age, sex, name and M.R #, surgery performed, ASA grading, type of anaesthesia (general anaesthesia, regional or monitored anaesthesia care), type of analgesia (narcotic, non narcotic or multimodal). Data collected after 24 hours included whether patients were discharged with analgesics or not, verbal pain score, whether using medication, reasons for not taking medication, and satisfaction with management of pain.

This audit was done for a period of three months at the surgical day care unit of Aga Khan University Hospital. Total numbers of cases done as day care during the time were 120. Out of these eleven patients did not have telephone access and eleven patients were admitted. None of the patients refused to participate. Out of these 98 patients only 76 could be contacted and assessed for adequacy of postoperative pain relief after discharge.

All of the cases were discharged with analgesics. Nine (11.8%) patients did not take analgesics. Of these eight patients did not have pain and one could not take it because of excessive vomiting.

Pain and Satisfaction Scores are presented in table 1 and 2. Eight patients (10.5%) had severe pain after going home upto 24 hours. Out of these eight patients three (3.9%) continued to have severe pain even after 24hrs, one had mild and four had moderate pain after 24 hours.

One patient who continued to have severe pain had arthroscopy and was given general anaesthesia and narcotics were used for analgesia and was taking

paracetamol postoperatively. Second patient had inguinal hernia repair under general anaesthesia with narcotics and NSAIDs and postoperatively was taking calpol. Third patient had haemorrhoidectomy under general anaesthesia with narcotics. Postoperatively she was on paracetamol and diclofenac. She had to go to the hospital for pain relief.

Twelve patients (15.7%) were not satisfied with pain management. Amongst them three patients had pain score of severe even after 24 hours, eight patients had moderate pain with score of 6-7 and one had mild with score of three after 24 hours.

Conclusion

We could only assess 63.3% of surgical day care patients, as others could not be contacted. All patients were discharged with analgesics. Only three percent reported severe pain after 24 hours which is comparable with the proposed standard for best practice which is < 5%. Sixty percent of patients had mild or no pain which is less than the proposed standard (>85%) and 84.2% were satisfied which is almost borderline (>85%) according to the bench mark of best practice.

We recommend the need to educate patients so that they communicate to the care giver that they are experiencing pain so that it can be treated. All health care

workers should be familiar with appropriate pain management modalities and the practice of prevention and multimodal analgesia should be implemented to obtain optimum pain management in ambulatory surgical patients.

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