PERIOPERATIVE PAIN MANAGEMENT IN DAY-CASE SURGERIES

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ABSTRACT

Success of day-case surgery depends, to a large extent, on both effective control of postoperative pain and minimization of side-effects such as sedation, nausea and vomiting, analgesia must allow the patient to be discharged safely and without delay and after discharge, the patient must not require close medical or nursing supervision, either for the administration of analgesia or for safety reasons.

Local and regional anaesthesia, alone or as part of general anaesthetic technique, offer major benefits to the ambulatory surgery patient who has an anxious nature; and with proper techniques and agents, patients are able to be rapidly discharged with minimal side-effects and optimal pain control.

Dispensing appropriate analgesia with clear instructions for the patient is crucial. Giving patients pre-packed analgesics for anticipated mild, moderate or severe pain, with clear directions has the potential for improving patient comfort at home.

KEY WORDS

day-case **analgesia** **ambulatory** **pain control**

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I'd like to thank ***ALLAH*** almighty for everything in my life,

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INTRODUCTION

Day surgery is a cost-effective, quality approach to surgery that has expanded rapidly in recent years. Multiple factors have contributed to this transition, including economic forces, improved anaesthetic and surgical techniques, better pre-operative planning, better patient education and an enhanced ability to deliver adequate analgesia in the outpatient setting. Many procedures that used to be performed on an in-patient basis under general anaesthesia are now performed on a day basis under local or regional anaesthesia alone or combined with sedation techniques.

Regional anaesthesia offers many advantages for the day-case surgery patient. Patients can remain alert and, with proper techniques and agents, are able to be rapidly discharged with minimal side-effects and optimal pain control. Local and regional anaesthesia, alone or as part of general anaesthetic technique, offer major benefits to the ambulatory surgery patient. In general, peripheral nerve blocks are under-used for ambulatory surgery. The use of regional techniques will depend on local tradition, the day-surgery facility, patient and surgeon co-operation and skill of the anaesthetists. In many institutions, neuraxial blocks such as epidural, spinal and CSE are

controversial regional techniques for day-case surgery. However, by appropriate patient selection, choice of equipment, drugs and adjuvants, the anaesthetist can tailor neuraxial blocks to a specific type and duration of surgery.

The success of day-case surgery depends, to a large extent, on both effective control of postoperative pain and minimization of side-effects such as sedation, nausea and vomiting. Inadequate analgesia after surgery is a problem: it has been demonstrated that one-third of patients suffer moderate to severe postoperative pain as a result of inadequate analgesia. Under-treatment is still one of the most common errors in the treatment of pain in children. Day-surgery analgesia must allow the patient to be discharged safely and without delay. Additionally, after the patient has been discharged, he must not require close medical or nursing supervision, either for the administration of analgesia or for safety reasons. Side-effects that might be regarded as minor in the inpatient may contribute to unexpected admissions in the day-case setting. Prolonged recovery may disrupt patient flow and increase institutional costs per patient. The unplanned overnight hospital admission rate may well reflect the quality of care in day-case surgery.

The growth of day-case surgery requires both a rapid return to street fitness and the provision of analgesia appropriate to the nature of the surgery undertaken. Balanced analgesia in day-case surgery commonly involves intra-operative administration of short-acting opioids such as fentanyl, and wound infiltration with local anaesthetic at the end of surgery supplemented in the postoperative period by an oral, non-opioid analgesic. Recent improvements in our pharmacological knowledge concerning pain medication have made it possible to provide more individualized pain treatment for adults and children.

Dispensing appropriate analgesia with clear instructions for the patient is crucial. Giving patients pre-packed analgesics for anticipated mild, moderate or severe pain, with clear directions has the potential for improving patient comfort at home. After discharge, patient follow-up is essential to monitor effectiveness of pain treatment. Day-surgery units should standardize and audit their analgesic treatments for mild, moderate and severe pain. New portable PCRA systems are becoming available which can provide effective and safe analgesia at home for several days. Small disposable pumps, pre-loaded with local anaesthetic, with pre-set hourly infusion rates or self-administered bolus infusions provide effective analgesia at home.

DAY CASE SURGERY

Day case surgery can offer a number of advantages for patients, health care providers, third-party payers, and even hospitals (table 1).Many patients, especially children and the elderly, prefer to have their surgical procedures performed as outpatients because it decreases separation from their familiar home environment(1). Unlike inpatient surgery, ambulatory surgery does not depend on the availability of a hospital bed, and thus there is a greater degree of flexibility for patients to schedule the timing of their operation. Outpatient surgery may be performed very safely with a low incidence of both minor and major morbidity(2). Studies have shown that unanticipated admission to the hospital occurs in only 3% of patients following ambulatory surgical procedures(3).The lower infection rate associated with day case surgery is particularly beneficial to pediatric and immuno-compromised patients. Finally, there is evidence that the incidence of respiratory complications (i.e., pulmonary embolus and pneumonia) may also be decreased(4).

There are also economic benefits associated with ambulatory surgery. The efficiency of ambulatory centers appears to be significantly increased, with shorter operating room times and faster turnaround times. The ability to care for high volume of patients may considerably reduce surgical waiting lists. Compared with similar procedures in hospitalized patients, there is less preoperative laboratory testing and a reduced demand for postoperative medications after ambulatory surgical procedures. These factors all contribute to the 25 to 75% reduction in overall costs for most operations performed in the outpatient setting. However, procedures requiring specialized postoperative care (e.g., extensive physical therapy or pain management) may actually may be more costly when performed on outpatient basis(5).

Table 1. Benefits of Day Case Surgery (adapted from reference 1)

* Patient preference, especially children and elderly
* Lack of dependence on availability of hospital beds
* Greater flexibility in scheduling operations
* Low morbidity and mortality
* Lower incidence of infection
* Lower incidence of respiratory complications
* Higher volume of patients (greater efficiency)
* Shorter waiting lists
* Lower overall procedural costs
* Less preoperative testing and postoperative medication