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بالرسالة صفحات
لم ترد بالأصل

Comparative study of the effect of intravenous tramadol, meperidine or nalbuphine on the recovery pattern, respiratory and analgesic effects in ambulatory day case surgery

Thesis

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Ambulatory Anaesthesia

With the exponential growth of ambulatory surgery, considerable attention has been directed toward providing patients with "the ideal ambulatory experience" a pleasant and uneventful stay[1].

When surgery is performed outside the conventional hospital, it can offer a number of advantages for patients, health care providers and the community. Patients benefit from day-surgery because it decreases separation from their home and family environment, decreases their likelihood of contracting hospital-acquired infections and reduces postoperative complications. Compared to traditional hospital admissions, there is less preoperative laboratory testing and a reduced demand for postoperative medications. Unlike inpatient surgery, ambulatory surgery does not depend upon the availability of a hospital bed and may permit the patient greater flexibility in selecting the time of his operation. Furthermore, the efficiency of the operating rooms in ambulatory centers appears to be significantly increased[2].

However, the time for establishing preoperative visit with patients is decreased. Even the existence of an anaesthesia clinic for consultation purposes does not necessarily overcome this and there may be an undesirable fragmentation of patient contact with medical and nursing personnel. There is also a reduced time for patient

observation and evaluation of postoperative complications that may occur[3].

Patient selection:

Currently, most anaesthetists will accept patients in class I and II of the American Society of Anaesthesiologists Physical Status Rating. Many services will also accept class III patients. Patients in this group must be medically stable, unlikely to be affected adversely by the proposed surgery or anaesthesia and for whom hospital admission may be detrimental[4].

Other important factors in the selection of patients for day case surgery are the ability of the patient to understand and comply with instructions[4].

Several medical conditions that would exclude patients from having ambulatory surgery can be mentioned as follows (Table I):

Table I: The inappropriate adult outpatients[5]

- Unstable ASA III or IV (cardiac, renal, endocrine, pulmonary and cancer).
- Poorly controlled seizures.
- Morbidly obese patients.
- Sleep apnea.
- Brittle diabetic.
- Active substance/ alcohol abuse.
- Psychological disturbances.

Selection of operative procedure:

A wide variety of surgery can be done on outpatient base. Examples of suitable procedures are shown in table II.

Examples of procedures that are inappropriate for outpatient management are situations where blood transfusion is likely to be necessary, where physiologic or emotional disturbance of the patient might ensure or where postoperative surgical care might be complicated.

Any procedure requiring the patient to be immobilized for long period is unsuitable. The duration of the surgery is commonly limited to less than 90 minutes. However, the longer the surgical procedure the greater the care that must be exercised regarding all stages of postoperative management[4].

Anaesthetic techniques:

Ambulatory surgery may potentially be conducted using a wide variety of general, regional or local anaesthetic techniques. The choice of anaesthetic technique depends upon both surgical and patient factors. In addition, sedation is commonly used to supplement local anaesthetic techniques[6].

I. General anaesthesia:

General anaesthesia for ambulatory surgery requires the same basic equipment for anaesthesia delivery, monitoring and resuscitation as is necessary for inpatients.

Table II: Examples of procedures suitable for ambulatory surgery[4].

Specialty	Types of procedures
Cardiac surgery	Insertion and replacement of pacemakers; cardioversion
Dental surgery	Dental clearance; extraction of wisdom teeth; extensive conservation in the mentally retarded
Dermatology	Excision of multiple warts and condylomata
Gynaecology	Dilation & curettage; termination of pregnancy; laparoscopic sterilization; cautery of cervix; cervical polypectomy; cone biopsy& marsupialzation of Bartholin's cysts
Medicine	Gastroscopy; electroconvulsive therapy
Ophthalmology	Strabismus operations; chalazion excision nasolacrymal duct probing
Orthopedic surgery	Carpal tunnel decompression; removal of ganglion; exostectomy; release of trigger finger; manipulation under anaesthesia
Otorhinolaryngological surgery	Myringotomy & insertion of grommets; antrostomies; nasal polypectomy; submucous diathermy; adenoidectomy; microlaryngoscopy & bronchoscopy
Paediatric surgery	Circumcision; hernias; orchiopexy; meatotomy; division of tongue-tie; seperation of labial & preputial adhesions; endoscopies; marrow puncture
Pain clinic	Chemical sympathectomy; epidural injections; intrathecal injections; nerve block

- *Intravenous agents:*

Intravenous (IV) agents are now routinely used for induction of anaesthesia in both adults and older children.

Properties of an ideal anaesthetic for ambulatory surgery include: [7]

1. Rapid and smooth onset of effect.
2. Produces sedation, hypnosis, amnesia and analgesia.

3. Lack of intraoperative side effects, (e.g. cardiovascular instability, respiratory depression).
4. Possesses a rapid recovery profile without postoperative side effects.
5. Provides residual analgesia during early postoperative.
6. Represent a cost-effective alternative.

Thiopental has long been the gold standard agent for IV induction. However, thiopental can impair fine motor skills for several hours and produce a "hang over" sensation even after short outpatient procedures.

Propofol has recently become the IV induction agent of choice for outpatient anaesthesia. Its use is associated with a rapid emergence and a very low incidence of postoperative side effects. In addition, propofol is frequently associated with a degree of euphoria on emergence and low incidence of postoperative nausea and vomiting (PONV) [8].

➢ *Volatile agents:*

Inspite of the increased interest in IV anaesthetics for maintenance of general anaesthesia, volatile agents remain to be the most popular maintenance anaesthetics. The newer halogenated ether compounds (e.g. sevoflurane, desflurane) have significantly lower blood /gas solubility characteristics, thereby permitting a more rapid onset and termination of their clinical effects[9].

Desflurane has recently become available and has rapidly gained popularity for maintenance of ambulatory anaesthesia. This