

INTRODUCTION

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The use of regional anaesthetic techniques in infants and children has become increasingly accepted as standard care. The most commonly performed regional anaesthetic techniques used in paediatric patients, are the caudal and lumbar approaches to the epidural space (*Markakis, 2000*).

Efficient and prolonged postoperative analgesia is obtained with regional anaesthesia in paediatrics. Its use has been due to an easy performance in paediatrics. Regional anaesthesia in paediatrics has many indications and few contraindications (*Ecoffey, 1997*).

Regional anaesthetic techniques are useful for providing postoperative pain control for ambulatory surgery in children. Good understanding of unique features of paediatric anatomy and physiology allows successful performance of these techniques (*Eck and Ross, 2002*).

The types of blocks that can be used safely in outpatient surgical paediatric patients are limited only by the skill and interest of the anaesthesiologist. Generally, the techniques chosen should be simple to perform, have minimal or no side effects, and not interfere with motor function and early ambulation (*Hannallah, 1999*).

Caudal anaesthesia is an inexpensive, simple and effective technique, not only as a supplement for postoperative analgesia, but also as a single method of anaesthesia (*Uguralp et al., 2002*).

Caudal block is the single most popular regional anaesthetic technique used in infants and children. It is safe and it has a low failure rate and a high success rate. The incidence of complication is probably 7/10,000, the lowest of all central blockade (*Zadra and Giusti, 2001*).

The provision of good postoperative analgesia without the side effects of opioids has been the impetus for the popular use of epidural analgesia. An advantage in children is that epidural analgesia with a wide segmental spread provides excellent analgesia without the haemodynamic instability seen in adults (*Brown et al., 1999*).

The use of spinal anaesthesia in children has been primarily limited to situations in which general anaesthesia was considered to pose an excessive risk. The ex-premature infant and the neurologically impaired child account for the majority of spinal anaesthetics used today. Spinal anaesthesia, compared with general anaesthesia, in the ex-premature infant undergoing inguinal hernia repair has decreased postoperative respiratory complications (*Lederhaas, 2003*).

Peripheral nerve blocks are useful adjuvants to general anaesthesia in the paediatric patient undergoing a wide variety of surgical procedures to provide intraoperative anaesthesia as well as postoperative pain control. (*Santhanam, 2003*).

These peripheral nerve blocks include nerve blocks for herniorrhaphy and orchiopexy (infiltration block of ilioinguinal/iliohypogastric nerve), penile surgery (penile nerve block), hip pinning (femoral nerve block), cleft lip repair (infraorbital nerve block), even dermatologic procedures (digital nerve block, ankle blocks) (*Flissher et al.,*

1993). Of all these types of peripheral nerve blocks, only those of upper and lower extremity are of practical importance.

The interest in topical anaesthesia has been renewed in pediatrics by the availability of several new ointments containing a mixture of local anaesthetics such as EMLA cream, TAC cream, and lidocaine – adrenaline – tetracaine gel, (Ernst et al., 1995).

Newer techniques using topical anaesthetics and tissue adhesives have significantly simplified the process of laceration repair, promoting application in office, clinic, and emergency department settings (Knapp, 1999).