SUMMARY

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Regional anaesthesia, alone or combined with lig t general anaesthesia, has many advantages in paediatric surgery. I provides excellent operative conditions, as well as being an excellent ıethod for postoperative pain relief.

The anaesthesiologists must understand the anatomical ifferences between the child and the adult patients as regards the ıatomical landmarks, size and depth of different structures. The proc dures also requires an understanding of the physiological differences wl ch modify the child's response to the different block techniques, parti ılarly with conduction block along the neuraxis. The pharmacokinet :s and the dosages of local anaesthetics are also different from that of ad lt patients.

The different techniques of regional anaesthesia used ı adults are acceptable in paediatrics, provided that the anaesthesiol gists have extensive experiences with the techniques to reduces the com ications.

Caudal anaesthesia is the most frequently emp oyed local anaesthetic technique in paediatric surgery. It has been use for several years in many paediatric centers for circumcision, orchiopex and hernia repair.

Lumbar and thoracic epidural blocks have many adva tages. They allow accessibility to all spinal segments. Therefore, urc ogic, upper abdominal and chest surgeries can be performed. The also allow repeated administration of local anaesthetics and narcotic ıalgesics in the postoperative period through an indwelling catheter.

Spinal anaesthesia has been used for any surgical procedu es below the diaphragm, especially in high risk infants. Therefore, t is now recommended by several authors to be the anaesthetic of choice in premature infants who are more liable to life threatening apnea and other complications after general anaesthesia.

All peripheral nerve blocks used in adults can be pe formed in children as well. A peripheral nerve stimulator can be used to i entify the peripheral nerves, thereby, avoiding the uncooperation of ıe child to monitor paresthesia.

Brachial plexus block by the axillary approach i the most satisfactory block for the upper limb operations in children. t provides excellent muscle relaxation and complete intra- and postop ative pain relief.

Femoral nerve block is a useful method for pain relief in children with femoral shaft fractures, since it will relieve muscle spa m, provide immediate analgesia, and allow time for the patient to be p epared for surgery.

Sciatic nerve block has been used primarily for rthopaedic surgery, but it can also be useful to provide analgesia for c ildren with tibial fractures.

Penile block which is becoming increasingly popul , is a safe, simple and easy technique to provide post-circumcision analg sia.

The interest in topical anaesthesia has been renewed i paediatrics by the availability of several new ointments such as EMLA ream, TAC cream, and lidocaine –adrenaline-tetracaine gel.

Regional anaesthesia can benefit children by impr ving the operative conditions and providing postoperative analgesia. Ho ever, the anaesthesiologists must have a clear understanding of the an: omy, the influence of age and size, and the potential complications.