# COMPARATIVE STUDY BETWEEN VARIOUS METHODS OF PROLONGATION OF THE DURATION OF CAUDAL ANALGESIA IN CHILDREN

**Thesis Submitted for Partial Fulfillment of M.D. Degree in Anesthesiology**



**BY**

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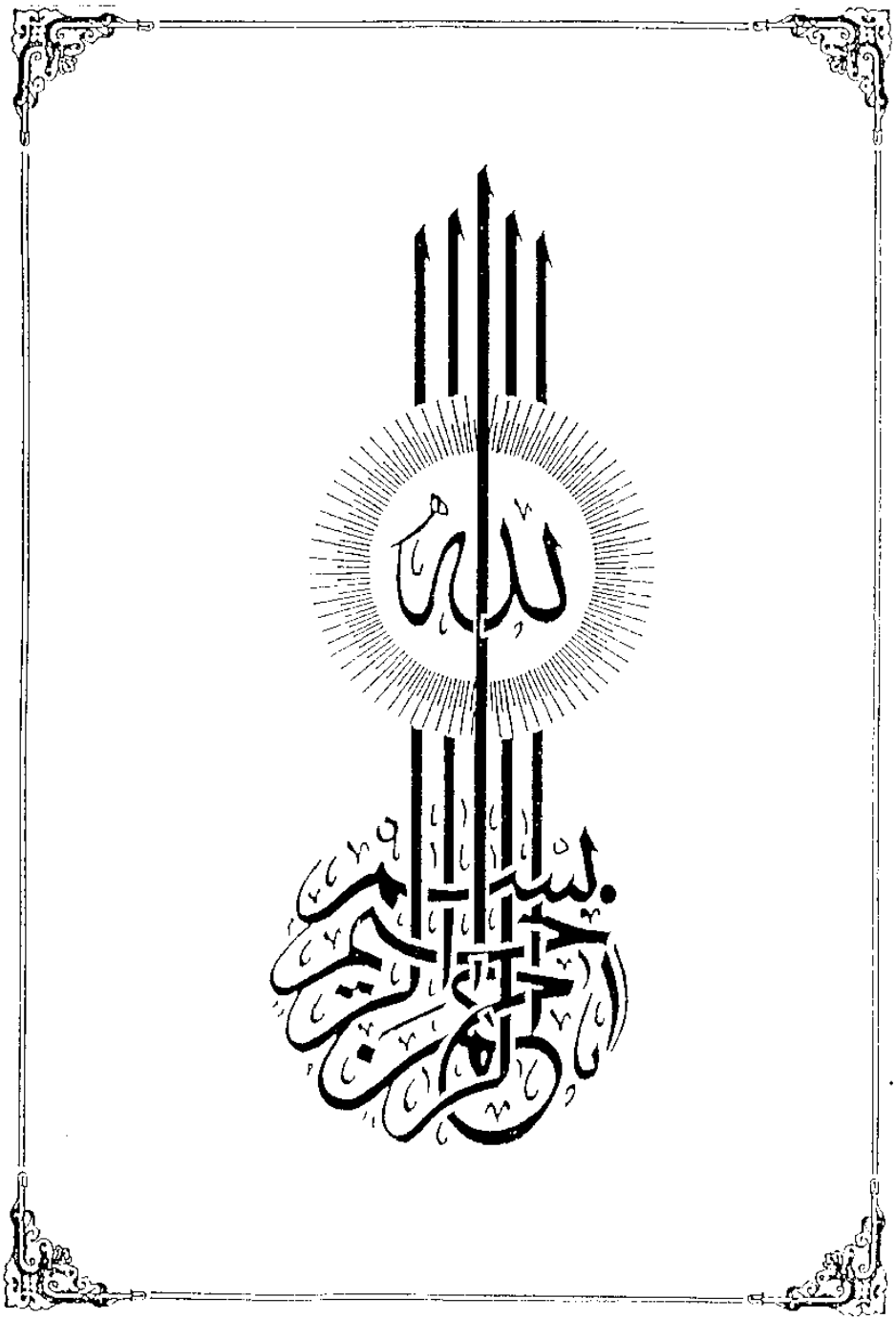




بسم الله الرحمن الرحيم

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صدق الله العظيم

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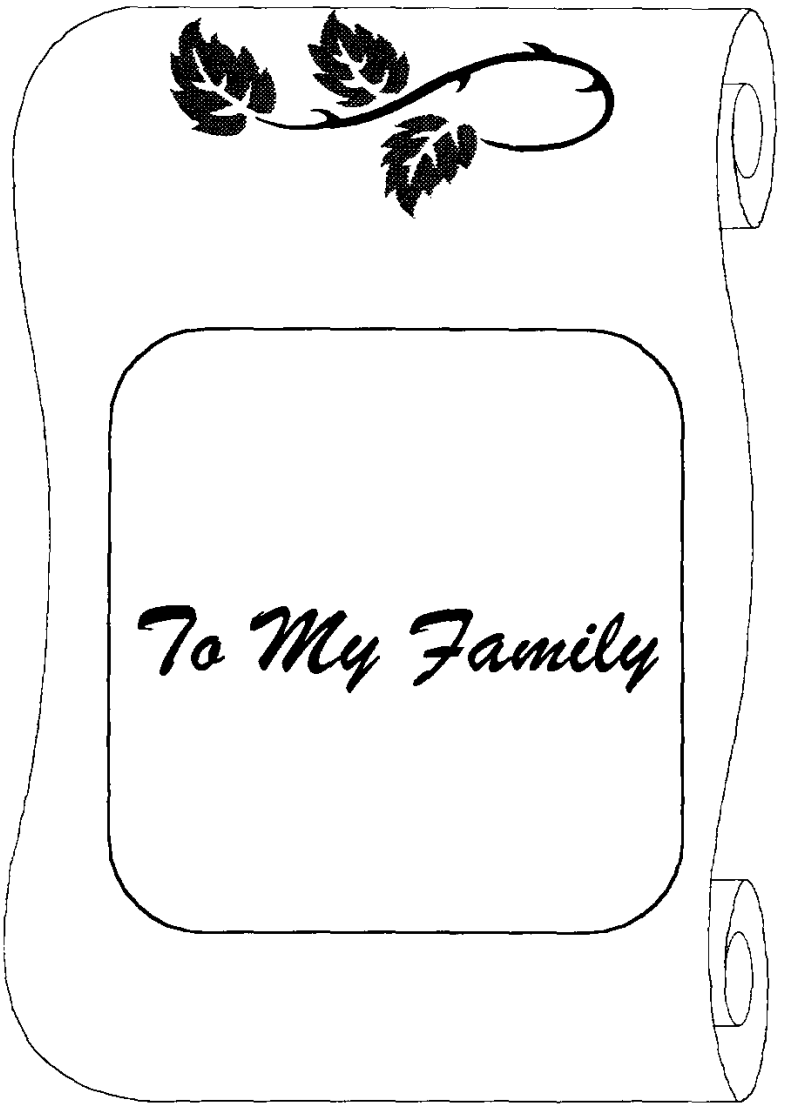

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***EMAD EL-DIN SAID***

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# Introduction

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Pediatric patients present developmental, anatomic, psychologic, physiologic and pharmacologic challenges that should be reviewed thoroughly before dealing with anesthetic or analgesic techniques for different surgical procedures ***(Stoelting and Dierdorf, 1993; and Steward, 1995)***.

For a long time in the past; neonates, infants and children were deprived from different anesthetic and analgesic modalities during painful maneuvers and operations. Even if they were allowed to receive anesthesia during the procedure, they were left to suffer postoperative ***(Houck et al., 1994)***.

The pathophysiologic consequences of this policy are alarming resulting in early derangement and delayed psychic trauma ***(Houck et al., 1994)***.

Modern anesthetic practice requires the provision of preoperative sedation, intraoperative painless surgery and postoperative analgesia. Great advances of drug polypharmacy and techniques have been developed to fulfil smooth painless management of anesthesia and recovery ***(Hannallah, 1997)***.

Of these modalities comes caudal epidural analgesia as an excellent adjuvant to general anesthesia and it has many advantages. It decreases general anesthetic consumption, permits rapid smooth recovery and good postoperative analgesia with early patient discharge ***(Hannallah, 1997)***.

For caudal epidural analgesia, local anesthetics are used, bupivacaine being the most common. Bupivacaine gives a good period of postoperative analgesia with usual preservation of motor power ***(Lofstrom and Bengtsson, 1995)***.

Different drugs have been used in conjunction with bupivacaine for pediatric caudal epidural analgesia to prolong the duration of postoperative analgesia produced and increase the quality of analgesia.

The management of pain in infants and children should be an integral part of pediatric anesthesiology practice. Preoperative preparation and intraoperative anesthetic plan should form a continuum with plans for postoperative analgesia, whether postoperative pain is managed by the patient's primary physicians or by a dedicated acute pain service ***(Berde and Kain, 1995)***.