IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 14, Issue 12 Ver. I (Dec. 2015), PP 58-59
www.iosrjournals.org

Caudal Anaesthesia for CTEV with Post-Op Analgesia in Paediatric Patient- A Case Report

Basant chaurasia*, Sewak Ram Verma*, Roseline Zohra Ali*
Department of Anaesthesiology CM Hospital and Medical College, Kachandur, Durg (Chhattisgarh) INDIA*

Abstract: *Epidural analgesia has many beneficial effects in paediatric patients. In clinical practice, it is commonly used to augment general anaesthesia and to manage postoperative pain[1,2]. Effective postoperative pain relief from epidural analgesia has numerous benefits including early mobilization; reduced time spent in a catabolic state and lowered circulating stress hormone levels with less emergence reaction[3]. Precise placement of epidural needles and catheters for single-shot and continuous epidural anaesthesia ensure the dermatomes involved in the surgical procedures are selectively blocked, allowing for lower doses of local anesthetics and sparing of unnecessary blockade in the regions where blockade is not desirable.*

So, here we present a case of congenital talipus equinovarus in a 3 years old child for surgical correction, done under continuous caudal epidural anaesthesia.

Keywords*: Caudal epidural anaesthesia/analgesia, Ropivacaine, Congenital talipus equinovarus, (Postero-medial release).*

I. Case Report-

A 3yrs old female child, weighing 13 kg, case of bilateral CTEV posted for Postero-medial release (PMR) of right foot, kept NBM for 4 hrs and informed valid written consent obtained from parents. Parts preparation done, child was premedicated with intramuscular Inj. ketamine 5mg/kg, glycopyrolate 0.04mg/kg and midazolam 0.15mg/kg and IV line was secured with 22G cannula.

A left lateral position with complete flexion given, sacral hiatus identified, with all aseptic precaution, caudal anaesthesia was given by 18G touhy epidural needle, sacral canal entered through sacral hiatus by piercing sacrococcygeal membrane with loss of resistance technique with saline. An epidural catheter 18G passed through it and a test dose of 2ml of 1.5% Lignocaine followed by Inj. Ropivacaine 0.375% 11cc injected through the catheter and it was fixed.

Figure1: Anatomical landmark

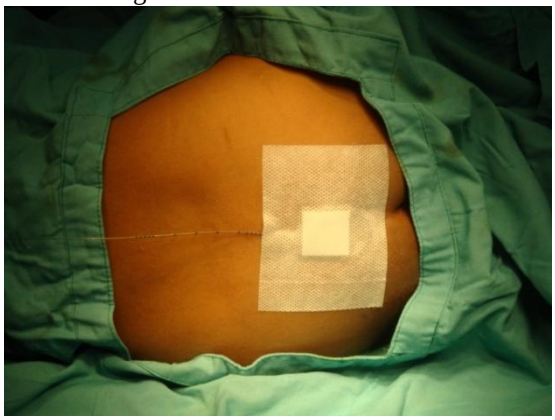

Figure 2- Epidural catheterisation

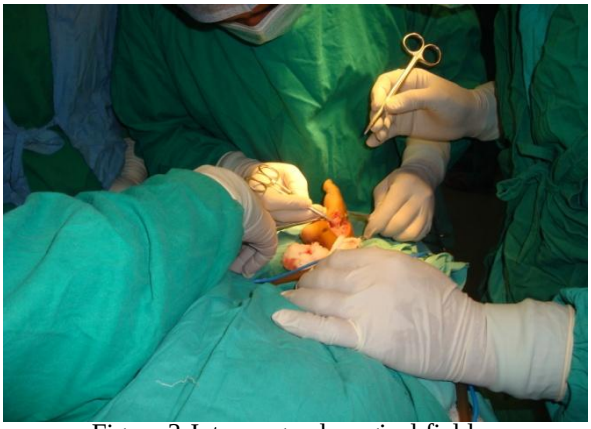

Figure 3-Intraop good surgical field.

II. Observation-

Continuous monitoring of ECG, Heart rate, NIBP, Spo_2, temperature was done and all the observations were within normal limits. Sensory level T10 achieved in 15 minutes and motor action was achieved in 20 minutes after injection of drug. Surgery lasted for 40 minutes. Wear-off time of sensory action was 90 minutes and motor blockade was for 60 minutes. Then first dose of caudal epidural top-up Inj.Ropivacaine 0.2%, 2 mg/kg was given when patient complained of pain after 5 hours in the post operative period.

III. Disscussion-

With the first dose of local anesthetic Inj.Ropivacaine analgesia maintained for 300 minutes and with the first top-up dose of Ropivacaine 2mg/kg 0.2%, analgesia was maintained for 290 minutes and then the second dose was repeated and analgesia lasted for 410 minutes.

Local anaesthetic concentration and volume are important factors in determining the density and level of blockade. Since most paediatric patients receive epidural analgesia in conjunction with a general anaesthetic, the main purpose of the epidural catheter is to deliver sufficient local anaesthetic solution for effective intraoperative and postoperative analgesia. Local anaesthetics such as 0.5% Bupivacaine or 0.5% Ropivacaine are seldom used for epidural anaesthesia in paediatric population that carries higher risk of toxicity and delays the mobilization[4].

Instead, larger volumes of more diluted local anesthetic to cover multiple dermatomes are used to facilitate the analgesia in the post operative period through epidural catheter which causes minimal motor blockade that helps in early ambulation. Ropivacaine has got better toxicity profile and it causes differential blocking action on sensory nerves with lesser degree of motor blockade at lower concentration as compared to Bupivacaine. Hence it is particularly useful in paediatric patients. Many adjuvant are used with local anaesthetics but are associated with unacceptable side effects[5,6].

IV. Conclusion

Hence, we concluded that caudal anaesthesia can be used safely in paediatric patients with good postop analgesia without local anaesthetic toxicity.

References-

[1]. Morgan GE, Mikhail MS. Paediatric Anaesthesia. In: Morgan GE, Mikhail MS, ed. Clinical Anaesthesiology Appleton & Lange. 1996; 726-742.
[2]. Dalens B, Hasnaoui A Caudal anesthesia in paediatric surgery: success rate and adverse effects in 750 con¬secutive patients. Anesth Analg 1989; 68:83-89.
[3]. Weldon BC, Bell M, Craddock T. The effect of caudal analgesia on emergence agitation in children. Anesth Analg. 2004;98:321–326.
[4]. Wolf AR, Valley RD, Fear DW, Roy WI, Lerman J. Bupivacaine for caudal analgesia in infants and children: The optimal effective concentration. Anaesthesiology 1988 ;69:102-106.
[5]. Ozkan S ,Pocan S, Bahar A, et al .The effect of caudal bupivacaine vs tramadol in posoperative analgesia in paediatric patients. The Journal of International Medi¬cal Research2003; 31:497-502.
[6]. Nagiub M, Sharif AM, Seraj Iv1 ElGammal M, Dawlatly AA Ketamine for caudal analgesia in children: com¬parison with caudal bupivacaine. Br J Anaesth 1991; 67:559-564.