

Circumcision by surface anesthesia -is it really painless? Our experience

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Abstract

Circumcision is a procedure of removal of prepuce skin for various causes including religious reasons. Usually it is done after adequate sedation or regional anesthesia. In our study we performed the surgery using EMLA cream i.e eutectic mixture of lignocaine 2.5% and prilocaine 2.5%. This study is conducted in order to assess the suitability and efficacy of surface anesthetic cream for doing day care procedure. Results were obtained by observation during surgery and post operative period follow up. In our study we performed circumcision using EMLA alone in 45 out of 70 cases. Remaining 25 cases required additional form of anesthesia.

Thus we concluded that EMLA is beneficial for performing circumcision in limited number of patients only especially for adult patients. Pain is mostly experienced at frenular region only even before the start of the procedure. Thus additional anesthetic agents are given in order to perform the surgery.

Keywords: circumcision, dorsal slit, EMLA cream

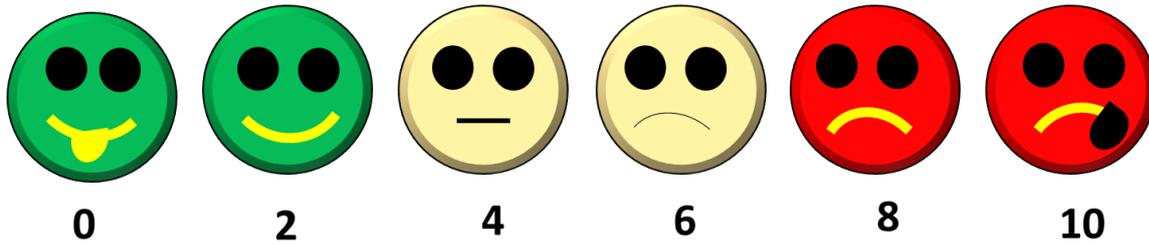
Introduction

Circumcision is a procedure of removal of prepuce skin. It is done for phimosis, paraphimosis, balanoposthitis and sexually transmitted disease¹. It is also commonly done procedure for religious cause. It is done by using various anesthesia such as IV sedation, spinal anesthesia, local anesthesia, and surface (topical) cream². Various techniques of circumcision include dorsal slit technique, guillotine method, plastibel device techniques are there. In this study, we did circumcision by dorsal slit technique using surface anesthesia³. Various parameters are analysed including pain, pulse rate, etc⁴. Pain is analysed using facial pain scale and visual analogue scale. We found that surface cream is used successfully for doing circumcision in limited patients only.

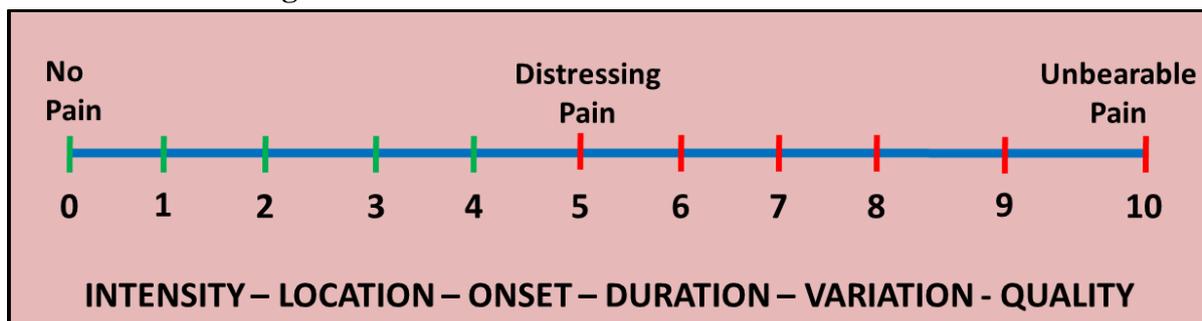
The Visual Analogue Scale (VAS) consists of a straight line with the endpoints defining extreme limits such as 'no pain at all' and 'pain as bad as it could be' The patient is asked to mark his pain level on the line between the two endpoints⁶. The distance between 'no pain at all' and the mark then defines the subject's pain. This tool was first used in psychology by Freyd in 1923⁷.

Tools used for pain assessment

1. Wong-Baker FACES



2. Visual Analogue scale



ASKING PATIENTS ABOUT THEIR PAIN

This tool was originally created with children for children to help them communicate about their pain. Now the scale is used around the world with people ages 3 and older, facilitating communication and improving assessment so pain management can be addressed.

Materials and Methods

Aims and objectives

To assess the effectiveness of surface anesthesia - EMLA cream (a eutectic mixture of lignocaine and prilocaine) as a topical anaesthetic for routine circumcision.

Study design- prospective observational study

Study location - vinayaka mission's medical college and hospital ,karaikal

Study duration - August 2021 to August 2022

Sample size - 70 patients

Inclusion criteria

1. Children planned for religious circumcision
2. Adults with phimosis

Exclusion criteria

1. Patients who are allergic to local anesthesia
2. Patient who are anxious and are not willing for surgery with topical agents only

Study procedure

Children and adult patients who are undergoing procedure are evaluated for coagulation profile. After getting consent from patients, EMLA cream is applied all around the root of penis and shaft of penis. Waiting time of one to two hours given depending upon the

anesthetic effect of the individual patient and procedure is done. Pain is analysed using visual analogue scale and facial pain scale and results are tabulated.

Children who are anxious for procedure are given additional anesthetic agent i.e. IV sedation and adults who experience pain are given additional injectable form of anaesthesia i.e. ring block.

Statistical analysis

Out of 70 patients, 50 cases are children under 10 years

20 patients are adults

15 Children who are anxious are given IV sedation

10 Adults cases who experience pain are given injectable form of anesthesia (pain is mostly felt at frenular area)

Results and Discussion

In our study, circumcision procedure completed in 35 out of 50 children without any hassle by using surface anesthetic agent alone. Intra operatively, children are monitored for pain sensation by recording pulse rate and blood pressure which is maintained at normal level throughout the procedure. Remaining 15 children were given IV sedation since they are uncooperative to the procedure. A study by Yıldız et al researching the attitudes and behaviors of anesthetic specialists to anesthetic administration outside the operating room stated that the highest participation was from university hospitals (31.7%)⁸. In the current study, the reason for the highest response rate coming from university hospitals (49.5%) may be linked to the active role played by universities in education and research.

A survey study by Şahin et al found that of 1,235 children's circumcisions were performed by traditional circumcisers for 13.3% and by pediatric surgeons, and urologists for the remainder⁹. In a study by Yakıncı et al researching the occupational distribution of those performing circumcisions, 66% were qualified health officers, 13.2% were nonmedical personnel, 8.8% were urologists, 6.2% were practitioners, 2.9% were general surgeons, and 2.8% were pediatric surgeons¹⁰.

Important risk factors include the patient's age, the employed surgical technique, as well as the experience of the person performing the procedure. In developed countries where circumcisions are performed by professionals, the rate of development of complications is 5%; in developing countries where circumcisions are performed by health technicians is 10%; and for circumcisions performed by a traditional circumciser, the rate reaches 85%. There are studies in Turkey indicating that there are more complications after circumcision by circumcisionists compared with specialist clinicians. Respiratory infections have been encountered by patients without preoperative evaluation by anesthesiologists before circumcision, with laryngospasm incidence rates increasing 2-7 times with mask anesthesia¹¹. In the current study, in general, more than one branch performed circumcision, and the highest rate was 21.8% pediatric surgery plus urology, 10.2% pediatric surgery, 7.3% urology, and 1.0% general surgery departments. In 10 out of 20 adults, procedure completed without any adverse effects. Remaining 10 cases were given injectable form of local Anaesthesia.

Thus, in our study we observed that circumcision done by surface anaesthesia is not truly painless. Additional anaesthetic agent is required for certain number of patients. Procedure completed without any extra anaesthetic requirements in limited patience only.

Post operatively, all patients are given oral antibiotics and analgesics and other supportive measures. All patients are called for dressing changed in post operative day 1. Post operative follow up of all patients are satisfactory. Anesthesiologists frequently choose laryngeal mask and the regional anesthesia method of caudal block for circumcision operations, and 31.6% use USG for the block. The most frequently observed complication appears to be hemorrhage. Paracetamol frequently is used for postoperative analgesia after circumcision.

Study limitations

Sample size is small

Many patients are anxious and did not give consent for surgery.

Conclusion

Circumcision is a commonly done procedure worldwide done through various techniques and various anaesthesia procedures. In our study we performed circumcision by using topical anesthetic cream which is successful with limited potential. Many patients required additional requirement of anesthesia by various forms for completing the procedure.

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