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Use of topical as only anesthetic for suturing a traumatic facial laceration

CASE REPORT

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Abstract – A case is described where only topical anesthetic was used for suturing facial lacerations. The patient had sustained facial lacerations after a motor vehicle accident. After some initial treatment the patient refused injection anesthesia so only topical anesthetics lidocaine–prilocaine was used for one of the lacerations. Suturing was possible to perform with only topical anesthesia with good patient comfort.

Trauma patients, visiting the emergency room with facial lacerations are usually scared of what's to come. Most of their phobia comes from the fear of the needle injection that precedes the repair procedure. This is especially true with pediatric patients, and many apprehensive adults. Traditionally, topical anesthetics are used to reduce the pain and subsequently the fear of the local anesthetic injection. Benzocaine is the most commonly used topical anesthetic (1). However its effect is questionable (1).

EMLA (AstraZeneca, Södertälje, Sweden) is a eutectic mixture of 2.5% lidocaine and 2.5% prilocaine has been found to be effective in children for the control of pain arising from venipuncture and has also been used for other minor procedures such as sinus puncture, biopsies, rubber dam clamp (2–4).

The effectiveness of topical prilocaine/lidocaine in reducing pain prior to intraoral needle injection has been demonstrated (5, 6). Furthermore, Al-Asfour et al. demonstrated that EMLA does not interfere with wound healing. (7) Encouraged by these results we decided to try the anesthetic cream EMLA as the only anesthetic on a patient who during treatment refused injection anesthesia prior to re-approximation and suturing of a traumatic facial lacerations.

Case report

A 37-year-old Egyptian male, presented to emergency room, with multiple facial lacerations, caused by a motor vehicle accident. The patient was an unrestrained driver, and sustained the trauma from hitting the windshield of his small pizza delivery vehicle. Due to the complexity of the facial lacerations, oral and maxillofacial service on-call were contacted.

After going over patients past medical history and his post trauma tests, the patient was examined, and the lacerations were closely inspected. The patient's medical history was unremarkable. He had a three centimeter shallow laceration inferior of the right lateral brow area partially involving the upper eye lid. Moreover, a 6-cm laceration which extended from the right zygoma area to the oral region involving the upper lip penetrating about 5 mm in depth. In addition, he presented with a 3.5 cm laceration inferior of the orbital area extending from the medial canthal inferio-lateral to the cheek (Fig. 1).

The patient was transported to the minor operating room. After some initial suturing the patient refused to have injection anesthesia because he feared the needle sticks. The option of using EMLA cream as the only local anesthetic, was presented to him as an alternative to the needle injection. His response was very positive, 'anything but the injections' he replied.

After draping the patient, the wounds were inspected, carefully cleaned and irrigated. After achieving some hemostasis, EMLA was applied in the laceration and covered with sterile gauze. It was kept in the wound for 8 min, and then the wound was re-approximated with 4-0 resorbable sutures Vicryl (Ethicon Inc., Somerville, NJ, USA) sutures in the deeper layers, and 5-0 nylon sutures Ethilon (Ethicon Inc.) in cutis (Fig. 2). Careful monitoring of patients response and comfort was kept throughout the procedure. An almost complete anesthesia was possible to achieve and the patient reported only minor pain and discomfort during the procedure. The suturing procedure could be carried out without any other anesthetics.

Discussion

The present case report illustrates a situation where suturing had to be performed in an emergency situation when the patient refused injection anesthesia. Situations like this are often seen in emergency clinics. The normal procedure is to encourage the patient to accept the pain

Fig. 1. Infra-orbital laceration before suturing.

Fig. 2. The same laceration after suturing

from needle stick of local anesthesia so the suturing procedure can be carried out. However, in some instances general anesthesia must be performed.

The good effect of EMLA cream to reduce or eliminate pain from needle stick has been earlier demonstrated (5, 6). The results of the present case further supports that it is possible in some cases to avoid needle administered injection and even pain from the suture needle can be reduced or eliminated.

EMLA cream was placed directly in the wound and covered with sterile gauze, and we would recommend waiting for 10 min before suturing can be carried out.

The use of prilocaine–lidocaine topical anesthesia in lacerations in the face may enable the surgeon to proceed with suturing in a patient refusing local anesthesia given by needle stick. The alternative in a refusing patient in the emergency situation will be general anesthesia, which will require extra resources and many times increased waiting time at the hospital. Furthermore in emergency clinics, outside hospitals, general anesthesia is not always available, and in such cases the patient must first be referred to a hospital for suturing. Placing the cream directly in the wound has no negative effects on wound healing (7). However surgeons should be aware that methemoglobinemia with prilocaine has been reported in small children and infants so it is advisable to avoid this treatment in children. However in adults the use of topical prilocaine–lidocaine anesthetics in lacerations may be an interesting option in special situations for the emergency team.

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