



Unique Journal of Medical and Dental Sciences

Available online: www.ujconline.net

Review Article

STUDY OF THE INCIDENCE OF THE LIP BITING AFTER ADMINISTRATION OF THE LOCAL ANESTHETICS IN PEDIATRIC PATIENTS

Patil Lalit Sunil^{1*}, Shah Preetam P²

¹Post Graduate Student, Department of Pedodontics and Preventive Dentistry, Bharati Vidyapeeth Dental College and Hospital, Pune, India

²Professor, Department of Pedodontics and Preventive Dentistry, Bharati Vidyapeeth Dental College and Hospital, Pune, India

Received: 28-10-2015; Revised: 26-11-2015; Accepted: 24-12-2015

*Corresponding Author: **Dr. Lalit Sunil Patil.**

Post Graduate Student, Department of Pedodontics and Preventive Dentistry, Bharati Vidyapeeth Dental College and Hospital, Pune, India

ABSTRACT

Background: Local anesthesia produces numbness to the cheeks and lips of the area involved and at sometimes involves tongue. Pediatric patients usually do not understand this effects of the local anesthesia and mostly have tendency to suck the affected area. Thus may results in laceration and swelling of the tissues.

Materials and methods: The study was carried out over a period of 3 years and each of the patients receiving local anesthesia for the root canal treatment or extraction purpose was included in the study.

Results: Total 349 patients were examined and out of these, 14 (4%) patients were found to be associated with lip biting injuries.

Conclusion: There is an always associated risk of the lip biting in pediatric patients with local anesthesia. Although, this may not be a serious thing, it can be very uncomfortable.

Keywords: Lip biting, Pediatric patient, Local anesthesia, Traumatic injuries.

INTRODUCTION

Local anesthesia results in a temporary loss of sensation including pain in one area of the body. This can be achieved by an injected agent or topically applied agent. In case of the pediatric patient management, fear related behaviors are difficult to manage and it results in a barrier to the good quality care¹⁻³.

Administering local anesthesia by injection is still the most common method used in dentistry. However, there is a constant search for ways to avoid the invasive and often painful nature of the injection, and find a more comfortable and pleasant means of achieving local anesthesia before dental procedures².

Self-induced soft tissue trauma is an unfortunate clinical complication of local anesthetic use in the oral cavity. Most lip- and cheek-biting lesions of this nature are self-limiting and heal without complications, although bleeding and infection are possible³.

MATERIALS AND METHODS

The study was done in the department of the pedodontics over a period of 3 years. Each of the patients receiving the local anesthesia was included in the study either for the extraction purpose or root canal treatment. The study group consisted of

children of the 2 to 12 years of age. Ethical committee approval was taken before start of the study and informed consent was obtained from the parents of the patients. Each of the patients was followed for the period of 3 hours after the administration of the local anesthesia and completion of the treatment procedures. All post-operative instructions were given to the patients and later the patients were examined for the presences of any traumatic injury especially lip biting. Total number of patients examined and the incidence of lip injury were recorded. Results were tabulated and percentage analysis was done.

RESULTS

Total number of patient examined was 349 patients and out of these, 14 (4%) cases were seen to be associated with the lip biting injuries. Out of these, 02 patients were having severe lip injuries.

DISCUSSION

Following a dental appointment requiring local anesthesia of the lower teeth (either unilaterally or bilaterally) to treat dental disease, a child may bite his or her lower lip out of curiosity associated with the unfamiliar sensation of being numb or inadvertently because no pain is felt. Accidental lip biting can also occur during postoperative eating or sleeping. Regardless

of the type of local anesthetic used, post-operative soft tissue anesthesia can last several hours^{4,5}.

The use of bilateral mandibular blocks does not increase the risk of soft tissue trauma when compared to unilateral mandibular blocks or ipsilateral maxillary infiltration.⁴ Using mandibular infiltration versus blocks is not of great value in prevention of these injuries, since the duration of soft tissue anesthesia may not be reduced significantly².

Not surprisingly, the incidence of soft tissue trauma was highest in the youngest age groups – 18% among children less than 4 years of age, 16% in children ages 4 to 7, 13% in 8 to 11 year old children, and 7% in children 12 years of age and older.⁵ The complications encountered most frequently were associated with self-inflicted soft tissue injuries—to the lip (18 reports), cheek (8 reports), or tongue (2 reports)⁶.

Caregivers responsible for postoperative supervision should be given a realistic time for duration of numbness and informed of the possibility of soft tissue trauma. Visual examples may help stress the importance of observation during the period of numbness. For all local anesthetics, the duration of soft tissue anesthesia is greater than dentinal or osseous anesthesia³.

Use of phentolamine mesylate injections in patients over age six years or at least 15 kg has been shown to reduce the duration of effects of local anesthetic by about 47 percent in the maxilla and 67 percent in the mandible. However, there is no research demonstrating a relationship between reduction in soft tissue trauma and the use of shorter acting local anesthetics³.

Placing a cotton roll in the mucobuccal fold may help prevent injury, and lubricating the lips with petroleum jelly helps prevent drying.³ Residual soft tissue anesthesia should be minimized in pediatric and special health care needs patients to decrease risk of self-inflicted postoperative injuries³.

If a child's lip becomes severely ulcerated, a concerned caregiver may contact a primary care physician or nurse practitioner to seek medical advice and treatment.⁵ Most cases, appropriate management of lower lip ulcers resulting from masticatory trauma is limited to palliative care. Systemic antibiotics and other surgical interventions are unnecessary, as lip biting ulcers are not bacterial infections⁵.

No medical or surgical intervention is necessary unless the ulcer becomes secondarily infected. The five classic signs of infection include rubor (redness), dolor (pain), calor (fever), tumor (swelling or edema), and loss of function (malaise). The first signs of a traumatic lip ulcer are localized swelling, redness and pain, which are benign and will self-resolve over time. The additional presence of a systemic fever and generalized malaise indicates infection and should be referred for further evaluation⁵.

CONCLUSION

There is an always associated risk of the lip biting in pediatric patients with local anesthesia. The incidence of the lip biting can be decreased by increasing care of the patient by the parents.

REFERENCES

1. Milgrom P, Coldwell SE, Getz T, Weinstein P, Ramsay DS. Four dimensions of fear of dental injections. *J Am Dent Assoc*, 1997; 128: 756-66.
2. Peedikayil FC, Vijayan A. An update on local anesthesia for pediatric dental patients. *Anesth Essays Res*, 2013; 7: 4-9.
3. Guideline on Use of Local Anesthesia for Pediatric Dental Patients. *American academy of pediatric dentistry. Clinical Guidelines*; 37(6): 199-205.
4. Malamed SF. Local complications. In: *Handbook of Local Anesthesia*. 6th ed. St. Louis, Mo: Mosby; 2013: 292-310.
5. Chi D, Kanellis M, Himadi E, Asselin ME. Lip biting in pediatric dental patients following dental local anesthesia: a case report. *J Pediatr Nurs*, 2008; 23(6): 490-3.
6. Boynes SG, Riley AE, Milbee S, Bastin MR, Price ME, Ladson A. Evaluating complications of local anesthesia administration and reversal with phentolamine mesylate in a portable pediatric dental clinic. *General Dentistry*, 2013; 70-6.

Source of support: Nil, Conflict of interest: None Declared