

A STUDY REGARDING LOCAL ANESTHESIA APPROACH IN THE REMOVAL OF MAXILLARY TEETH

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ABSTRACT

Introduction: In the presence of latest techniques of injection, patients feel frightened and painful within the case of palatal injection, as a result of this pain is attributed to the palatal mucous membrane displacement and excessive complement of nerve within the course of anesthesia. **Objective:** The in-hand analysis study is geared toward the demonstration of local is potent for the availability of palatal anesthesia if it's administrated buccally throughout removal of jaw tooth without any demand of palatal injection. **Materials and Methods:** Total seventy-five cases were listed within the analysis paper. Out of this total twenty-five were controls. Each patient enclosed within the analysis study was diagnosed unilateral extractions. Out of the entire sample 2 milliliter of two % local including (1:80,000) Adrenalin injected into tooth buccal vestibule that was diagnosed for extraction without the utilization of palatal injection. After the time of eight minutes jaw tooth extraction was completed. Twenty five patients of control group experienced similar procedure of palatal injection. Faces pain scale (FPS) was and hundred-millimeter visual analog scale (VAS) was completed once the act of extraction in each patient. **Statistical Analysis Used:** Chi-square test & Unpaired t test. **Results:** According to FPS and VAS scores, during the comparison of permanent removal of maxillary tooth with the help of and without the help of palatal injection, difference in pain scales was not found significant in statistical terms as the p-value was observed more than 0.05. **Conclusion:** Permanent maxillary tooth extraction is possible through depositing two milliliter of Lidocaine HCl in tooth buccal vestibule any necessary need of palatal anesthesia.

KEYWORDS: Latency period, Infiltration, pain, Lidocaine HCl two milliliter, visual analog scale, palatal injection and (FPS) faces pain scale.

INTRODUCTION

Palatal mucosal binding to plenteous nerve complement and underlying periosteum, makes the act of inserting injections in palate awfully full of pain.^[1] Displacement of mucoperiosteal causes this unendurable pain rather than injection needle that pierces mucosa. Numerous pain reduction strategies are often useful in this regard for the dampening of pain caused by injections of intraoral kind, it additionally includes an aesthetic application, Trans dermic electronic nerve stimulation (TENS), processed injection systems, topical cooling of the palate, mixture mixture of local anesthetics (EMLA) and pressure administration.^[2] Regionally administrated anesthetics, it's claimed that articaine belongs to amide group which is potent enough to be subtle through hard and soft tissues during a reliable approach.^[6] This characteristics of articaine places it in the possibility to obviate demand of palatal injection throughout buccal infiltration, within the case of jaw teeth are detected foot extraction procedure. Restricted literature is out there during this side that deals and addresses the matter of Lidocaine property of diffusion. Therefore, in-hand analysis study is

geared toward the demonstration of Lidocaine is potent for the supply of palatal anesthesia if it's administrated buccally for the duration of removal of jaw tooth without any demand of palatal injection.^[3]

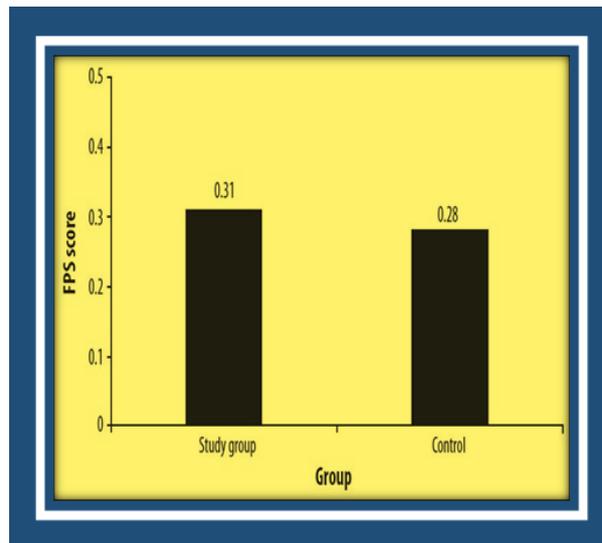
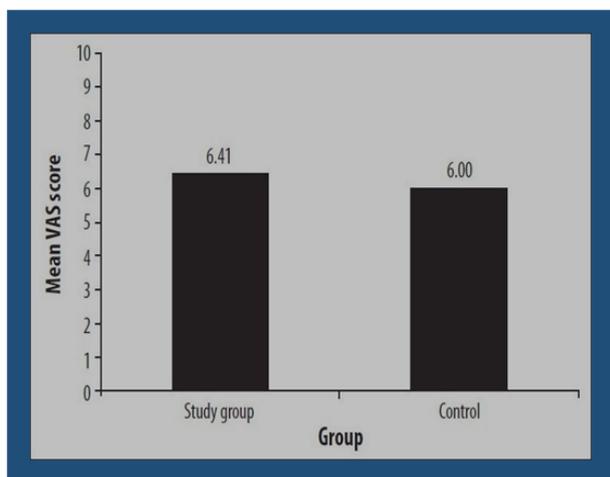
MATERIALS AND METHODS

Out of total sample size as mentioned earlier 75 patients, men and women were respectively 26 and 49 with an average of 40.21 years. They were attending permanent maxillary teeth extraction department because of numerous reasons. Every patient underwent teeth extractions (after the acceptance and permission of Institutional Review Board for the safety of patients) just 1 quadrant of maxillary arch. Not even a single patient reflected general severe diseases opposing the extraction procedure of teeth. All the patients underwent the following procedure: firstly, muco-buccal fold adjacent to target teeth was dehydrated with the help of a dry cotton gauze; secondly 2 mL Lidocaine (including 2 percent Lidocaine and adrenaline 1: 80,000) injected at a position by taking precautions of aseptic nature. Same kind of procedure was observed for control group, which

had 25 cases of teeth extraction, in these cases mucosa dehydration with the help of a cotton gauze was an exception, Lidocaine (1.75 mL) was buccal injected palatal injection (0.25 mL) was also administered. A combined method of teeth extraction was employed as forceps and elevation method with minimum reflection of palatal gingiva. The research was held for all authors have and firm maxillary teeth. After the eight minutes wait time after being injected every patient was proceeded with the stated procedure. The question of pain was asked from the patients at short intervals in the process of teeth extraction. These questions were asked for the 100 mm visual analog scale (VAS) and faces pain scale (FPS) at the end of extraction procedure. In the disability of communication, the facial expression is used for the measurement of pain scale. Intensity of the pain can best be judged through the facial expressions of the patient. VAS was used for the severity measurement of pain. Absolute and no pain were the markers for the observation of pain for 100 mm VAS. Standard values of FPS chart were considered as reference [chart indicated certain scores (0 – 10) for patients posing certain facial countenance/expressions which directly depends on pain felt in the course of teeth extraction procedure]. Multiple scoring was neglected. VAS readings were taken by the careful detailed explanation of the patients and FPS was scored from patients' facial countenance.

RESULTS

As per FPS and VAS scores, during the comparison of permanent removal of maxillary tooth with the help of and without the help of palatal injection, difference in pain scales was not found significant in statistical terms as the p-value was observed more than 0.05 as reflected in Figure-I and II. VAS scores according to unpaired t test was calculated (0.584); whereas, FPS score according to chi-square test as (0.801). No logical reason stands for the division of 75 over 25. As the nature of the research study was preliminary in nature, that is why, no statistical significance was observed in taking equal strength of study and control patients (groups).



DISCUSSION

Numerous techniques such as factor alteration connected to injected solutions, suggestion, speed reduced injection, temperature & pH and surface preparation of tissues before the penetration of needle, have been under practice for the reduction of pain during intraoral injections, among these practice of topical anesthetic is commonly administered option.^[5] Its effectiveness is only on the surface tissues (2 – 3 mm) & deep tissues to area of practice are poorly anesthetized. Surface anesthesia allows traumatic penetration of needle; but, because of palatal density firm adherence to primary bone and soft tissues, awful pain of palatal injection remains same. More resistant to effects of topical anesthetics is palatal mucosa rather than intraoral investigation of sites.^[6] EMLA is a type of anesthesia which was introduced in 1980s, it produces skin surface anesthesia; it is more efficient over conventional topical anesthetics when administered to attached gingivae.^[7] it has been used in an efficient and effective intraoral way; though, its design is not attributed to intraoral management. No added flavor is present rather the taste is even bitter.^[8,9] In the same way, alleviation of pain is attributed to TENS when administered intraoral.^[10] These methods are practicable but at the same time complex, time consuming and expensive nature wise. Patients also experience discomfort during the administration of palatal injection. In the range of locally administered anesthetics, it is claimed that articaine belongs to amide group.

Which is potent enough to be diffused through hard and soft tissues in a reliable way. These characteristics of articaine places it in the possibility to obviate requirement of palatal injection during buccal infiltration, in the case of maxillary teeth are pointed out foot extraction procedure. Similar results have been stated by Uckan in his research which was conducted on fifty-three patients by using articaine, it proves the difference in terms of success rate not significant statistically in the removal of permanent maxillary tooth with the help of

and without the help of palatal injection when they were compared in terms of pain countenance.^[6] According to Lima Júnior determination removal of maxillary third molar can possibly be performed with just four percent of Articaine buccal infiltrative anesthesia in maximum cases, without any requirement for palatal supplemental injections.^[11] According to the research of Fan (1.7 mL) deposition of four percent Articaine with epinephrine (1: 100,000) into buccal vestibule delivers similar clinical effectiveness to regular anesthesia type with palatal injection in case of removal of maxillary tooth.^[12] On the other hand, Ozeç's research fails to find an evidence for the confirmation of theory which relates to diffusion of vestibule-palatal four percent articaine or presence of four percent articaine at palatal tissues after the administration of buccal injection. Contradictory results are formed regarding the same issue under research by various researchers about the advocacy of vestibule-palatal diffusion presence.^[13] In comparative analysis between articaine & Lidocaine, dominance of articaine over Lidocaine couldn't be corroborated in statistical way with the help of any clinical research and investigation. Same sort of behavior was observed through both ways for the reduction of pain in the management of irreversible pulpitis, since it exhibits their similar features.^[14] Current research paper finds out that a Lidocaine deposition to buccal vestibule and 8minutes inactivity period reflects similar statistical outcomes as of past researches carried out on the practice and administration of articaine.

CONCLUSION

According to the outcomes of this analysis in thought to a preliminary study, a lot of inquiring is usually recommended on increased range of samples for supportable results. Our analysis targeted restricted range of patients as we have a tendency to believe that outcomes won't vary in massive proportions. Within the current analysis the distinction in levels of pain as experienced by patients of each the teams was measured by a statistical process. However, outcomes mirrored good permeation of local anesthetic with delayed inactivity time of eight minutes may evade the need of a palatal injection, because of its feature of diffability within the tissues. During practice it's more effective to others mentioned in the previous strategies in the procedure of extraction of permanent maxillary tooth.

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