



RANGSIT UNIVERSITY  
มหาวิทยาลัยรังสิต

การเปรียบเทียบความเจ็บปวดจากการฉีดยาชาแบบดั้งเดิมที่ด้านแก้มและฉีดยาชาแบบดั้งเดิม  
ร่วมกับเครื่องมือเด็นทัลไวบ์®

**Comparison of injection pain from single buccal infiltration anesthesia using conventional  
technique and using DentalVibe® assisted conventional technique**

**By**

**SUDEEP**

**PAWA**

**CHOMMAIPORN**

**NOPPARATHIRUN**

**THUNSINEE**

**RONNARONGSENEE**

**PAPITCHAYA**

**VANGTAL**

**PAPON**

**PATTANASIRIKUN**

**CHARURIN**

**BOONWAN**

**DUANGTAWAN**

**RINTANALERT**

**Advisor: Assoc. Prof. Ozgur Erdogan**

**Co-Advisor: Dr. Anatchai Sinsawat**

**Contact: Sudeep Pawa**

**Tel. 0834200057**

**Email: sudeppawa@hotmail.com**



RANGSIT UNIVERSITY  
มหาวิทยาลัยรังสิต

การเปรียบเทียบความเจ็บปวดจากการฉีดยาชาแบบดั้งเดิมที่ด้านแก้มและฉีดยาชาแบบดั้งเดิม  
ร่วมกับเครื่องมือเด็นทัลไวบ์®

**Comparison of injection pain from single buccal infiltration anesthesia using conventional  
technique and using DentalVibe® assisted conventional technique**

Pain, an unpleasant sensory and emotional experience, is the most distressing aspect of dentistry. Local anesthesia has become the most effective drug for pain management in dentistry. However, the discomfort from needle penetration, volume, and pressure has been reported to be a factor in avoiding dental treatment. DentalVibe® is a recently introduced device that delivers pulsed, percussive micro oscillations to the site where an injection is being administered.

**Objective:** To determine whether the use of DentalVibe® assisted system can alleviate the pain caused by single buccal infiltration anesthesia in comparison with conventional technique.

**Methods:** With 32 subjects, a local infiltration with 2% mepivacaine containing 1:100,000 epinephrine was injected through a 30 G needle. The selection of injections method was done randomly. One visit using a conventional buccal infiltration technique, and another with the DentalVibe® assisted system.

**Results:** 14 subjects (43.75%) found the injection with the DentalVibe® assisted technique to be less painful than the injection with the conventional technique, while 16 subjects (50%) found the injection with the DentalVibe® assisted technique to be more painful than the conventional technique. One subject (0.32%) found the two techniques to be equally painful. Only two subjects (0.64 percent) reported no pain with the DentalVibe® injection (pain=0). In comparison, four subjects (12.5 percent) felt no pain with the conventional injection technique. Using Wilcoxon signed rank test, there was a statistically significant not differences in the VAS and Wong-Baker FACES pain scale between the two types of injection ( $P>.001$ ).

## **Conclusion**

There were no statistically significant difference between these two techniques in the reduction of pain during injection. Therefore, we accept the null hypothesis that there is no difference in the pain perceived between conventional technique assisted by DentalVibe®.