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**The Effect of Local Application of Bupivacaine In Pain
Control Following Impacted Mandibular Third Molar
Surgery: A Randomized Controlled Study**

A thesis submitted to the council of the College of
Dentistry at the University of Baghdad, in partial
fulfillment of requirements for the Degree of Master of
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Submitted by

Mohanad Ali Shabat

B.D.S.

Supervised by

Prof. Dr. Salwan yousif Bede

B.D.S., F.I.B.M.S.

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Abstract

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Background: The surgical extraction of impacted mandibular third molars is generally followed by postoperative pain. The aim of this study was to assess the effect of local application of bupivacaine in reducing postoperative pain following impacted mandibular third molar surgery.

Materials and methods: A prospective single blinded randomized controlled study was conducted on 40 patients who had undergone surgical removal of impacted mandibular third molar under local anesthesia; for the study group (no.=20) absorbable gelatin sponge soaked in 3 mL of 0.5% plain bupivacaine hydrochloride was locally applied in the post-extraction socket, while for the control group (no.=20), an absorbable gelatin sponge soaked in 3 mL of normal saline was used. Pain intensity was assessed using a numerical rating pain scale 4 and 12 hours postoperatively at the day of surgery and also from second to seventh days after surgery. The variables were compared between the two groups and probability values <0.05 were considered statistically significant.

Results: Postoperative pain scores were significantly reduced in the study group at 4 hours compared to the control group ($P= 0.003$), whereas the difference in pain scores between the two groups, 12 hours after surgery, was statistically non-significant ($P= 0.4434$). Also the difference in pain scores between the two groups was statistically non-significant from the second to seventh days after surgery.

Conclusion: the results of this study demonstrated the effectiveness of local application of bupivacaine in reducing post-operative pain at the first four hours after surgery without any significant complications



جمهورية العراق
وزارة التعليم العالي والبحث العلمي
جامعة بغداد
كلية طب الاسنان

تأثير التطبيق الموضوعي لعقار بيوبيفاكايين في السيطرة على الألم بعد جراحة الرحى الثالثة المطمورة بالفك السفلي

رسالة

مقدمة إلى مجلس كلية طب الاسنان في جامعة بغداد لأستيفاء متطلبات درجة الماجستير في
جراحة الفم والوجه والفكين

من قبل

مهند علي شباط

بكالوريوس طب وجراحة الفم والاسنان

باشراف

الاستاذ

د. سلوان يوسف حنا

بورد جراحة الفم والوجه والفكين