

*The Local Effects of Tramadol on Onset and
Duration of Local Anesthesia of Lidocaine and
Pain Intensity after Surgical Removal of Lower
Wisdom Teeth*

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Abstract

Background

One of the important concerns of any branch of medical sciences is the pain and its control , and one of the important method of pain control is local anesthesia .

Local anesthesia regarded safe and effective pain control during surgical procedures and it is essential for today's dental practice . local anesthesia is fundamental for pain free dentistry which is very important factor to reduce the fear and anxiety that associated with dental procedures.

Aim of study

The purpose of this comparative study is to study the local effect of tramadol add to lidocaine on duration and onset of anesthesia and pain intensity in surgical extraction of lower wisdom teeth .

Materials and Methods

This double blind study was performed on 48 healthy individuals who needed surgical extraction of lower wisdom teeth.

Samples were divided into two group, each one with 24 samples :

1. *Group C. (control)* : Lidocaine hydrochloride 2% , 1:100.000 epinephrine (1.8 ml cartridges) local anesthesia is given by nerve block injection of the inferior alveolar nerve and infiltration of buccal nerve , using one and half cartridges (2.7 ml) and after that inject saline 1ml cartridge (as placebo) immediately after local anesthesia injection .
2. *Group T (study)* : Lidocaine 2%, 1:100.000 epinephrine. One and half cartridges (2.7 mL) and inject tramadol (50 mg) 1 ml cartridge also immediately after local anesthesia injection .

For each patients , onset and duration of anesthesia are recorded , and pain intensity is evaluated by Numerical Rating Scale (N.R.S.) for six hour after surgery .

Results

The mean of onset of anesthesia was 3.208 min in control group and was 3.292 min in study group.

The mean of the duration of anesthesia was 195.62 min in control group and was 292.08 min in study group, that mean in study group, the duration of anesthesia prolonged than that in control group without any effects on onset of anesthesia.

During the 6 hours after the surgery, 68.05 % of patients in control group were maintain NRS from 0 to 3, while in study group 73.36% of patients have NRS from 0 to 3, so there are slightly decrease in pain intensity in study group.

Conclusion

It is concluded that Tramadol administered locally at the surgical site prolongs the effect of local anesthetic Lidocaine, that it prolong duration of local anesthesia with out significant effect on onset of anesthesia and it is reduce post operative pain intensity.