

**PHARMACOLOGICAL
CONTROL OF ORTHODONTIC
PAIN
(A CLINICAL STUDY)**

**A Thesis Submitted to the Council of the College
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**By
Thaira Abbas Jassim
B.D.S.**

Supervised by:

Prof. Dr. Nidhal H. Ghaib

Assist. Prof. Dr. Abdul Rasoul M. Wayyes

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Jamadi II 1427

ABSTRACT

This study aims to follow the course of orthodontic pain after separator placement, then, to reveal the best non-steroidal anti-inflammatory drug and the best type of elastomeric separator used to decrease this pain.

This study was a double blind, randomized, and a placebo controlled clinical trial. The sample was composed of 120 volunteers divided in to 6 groups; each group consisted of 20 subjects. Each volunteer was addressed to one of two major groups; long acting drugs (*Meloxicam*, *Piroxicam* or *Placebo*) or the short acting drugs (*Mefenamic Acid*, *Ibuprofen*, or *Placebo*). After one hour of taking the first capsule (*preoperatively*), eight elastomeric separators, mesial and distal to the first permanent molars were placed for each subject (4 *round* in cross section separators on one side and 4 *rectangular* in cross section separators on the other side), followed by a postoperative dose for 3 days. Pain was measured using the Visual Analog Scale method on four activities (chewing, biting, fitting back teeth, and fitting front teeth). Each subject was provided with a 15 page booklet that had a case sheet for the first page and a repeated Visual Analog Scale on the following pages at 7 time intervals (after 2, 4, 6, and 24 hours, 2, 3, and 7 days).

The results revealed that pain started low at 2 hours, increasing gradually till *peak* level at 24 hours, and then decreased again, but still high after 2 and 3 days to tail off by 7 days, with *chewing* and *fitting back teeth* being the most painful sites. The *rectangular* separator was significantly more painful than the *round* separator. All non-steroidal anti-inflammatory drugs used managed to reduce pain significantly compared to placebo. Though not at significant level, *Piroxicam* had the lowest pain levels, making it the preoperative and postoperative analgesic of choice for this study.