



**“COMPARATIVE STUDY OF PREEMPTIVE ANALGESIC EFFECT OF
DICLOFENAC SODIUM AND TRAMADOL IN THIRD MOLAR SURGERY
- A PROSPECTIVE STUDY”**

By

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Dissertation Submitted to the
Rajiv Gandhi University of Health Sciences, Bangalore, Karnataka

In partial fulfilment
of the requirements for the degree of

MASTER OF DENTAL SURGERY (M.D.S.)
in
ORAL AND MAXILLOFACIAL SURGERY

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DHARWAD**

2014-2017

Abstract

AIMS AND OBJECTIVES: To compare the preemptive analgesic effect of Diclofenac Sodium and Tramadol following surgical removal of mandibular third-molars.

MATERIALS AND METHODS: The study included out patients who were reporting to department of Oral and Maxillofacial Surgery, SDM College Of Dental Sciences And Hospital, Dharwad for surgical removal of impacted mandibular third-molars. A randomized, double-blind clinical study was conducted among 50 patients. Patients were divided into 2 groups. Group I and group II included 25 patients each who were given oral diclofenac sodium 50 mg and tramadol 50mg tablets respectively, 1 hour before the procedure. All the operative procedures were done by a single operator. Dexamethasone 8mg was administered intravenously before the procedure in both the groups. The 2 groups were compared and data was analysed statistically.

RESULTS: In diclofenac group the mean pain score at 2hr was 1.52, which increased at 4 hr and 6 hr with mean score of 2.6 & 3.44 respectively. The pain started reducing from 12hr after surgery, the mean score was 2.24 at 12 hr. On 1st postoperative day mean pain score was 1.76 and on 2nd and 3rd post op day pain was significantly reduced to a mean score of 0.92 & 0.32 respectively.

In Tramadol group, mean pain score at 2 hr was 1.08, which was less compared to Diclofenac group. But pain score increased subsequently at 4 hr, 6 hr, 12 hr. On 1st, 2nd and 3rd post op day the mean pain score was 2.76, 2.16 & 1.32 respectively. The mean pain score was more in Tramadol group when compare to the Diclofenac group.

The facial swelling was evident in both Diclofenac and Tramadol group but it was less in Diclofenac group when compare to the Tramadol group. The percentage of changes in pre-operative and postoperative facial measurements were statistically significant in both the groups(>0.005). In terms of mouth opening, in Diclofenac group changes from pre to postoperative mouth opening was 9.04% with P-value of 0.0143, which was statistically significant(>0.005). In Tramadol group it was 4.80% with P-value of 0.0097.

CONCLUSION: To conclude 50mg of oral Diclofenac sodium provides a better preemptive analgesia after surgical extraction of third molars when compare to the same dose of Tramadol. And also Diclofenac is a better drug to reduce the post-operative oedema when given along with 8mg of IV Dexamethasone. In terms of mouth opening there was no significant changes noted in both the groups.

Keywords: Preemptive analgesia; Diclofenac sodium; Tramadol; Pain; Facial swelling; Trismus