COMPARATIVE ANALYSIS OF DEXAMETHASONE AND METHYLPREDISOLONE IN REDUCING POSTOPERATIVE EDEMA AND INFLAMMATORY RESPONSE AFTER ORTHOGNATHIC SURGERY

By

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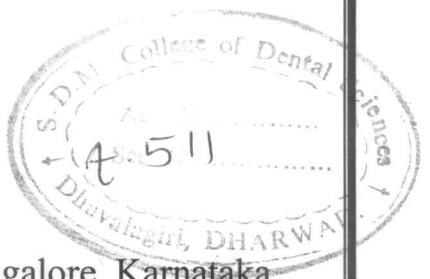

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ABSTRACT

Background and Objective: To determine which one of the two drugs, namely dexamethasone and methylprednisolone is more efficient in reducing postoperative edema and inflammatory response after orthognathic surgery.

Method: This study was performed on patients who underwent orthognathic surgery at Craniofacial Unit, S.D.M. College of Dental College, Dharwad, between September 2004 to August 2007. The selected patients were divided into two groups such that one group (Group A) received Dexamethasone as the steroidal regime and in another group (Group B), Methylprednisolone was administered. Further more these two groups were divided into two groups each, as patients undergoing single jaw surgery and patients undergoing double jaw surgery. The patients stayed for minimum of three post operative days for the study review on 1st, 2nd and 3rd post-operative day. On these three post operative days, patients were assessed for C-Reactive Protein, Erythrocyte Sedimentation Rate, Total blood Count and Swelling.

Results: When compared between the efficacies of the two drugs, in reducing the inflammatory response after orthognathic surgery, CRP being the key evidence showed that its production was much more reduced in the patients treated with MPSS than the DEX group. Further more the effectiveness of MPSS was consistent in reducing the post operative CRP. Whereas in the DEX group the CRP was produced more and when observed on the 2nd and 3rd post operative days, the levels of CRP assumed an up road.

Conclusion: As the CRP level is a key marker of inflammation, we conclude that methylprednisolone is superior to dexamethasone in reducing post-operative

inflammation. Methylprednisolone was also found to be superior in reducing post operative swelling as compared to dexamethasone group in double jaw surgeries. In our study, we also noticed that methylprednisolone was more effective that dexamethasone in reducing post operative inflammation with respect to ESR and total count, but these two parameters did not show any statistical significance.

Keywords: Methylprednisolone, Dexamethasone, Orthognathic Surgery, C-Reactive Protein.