SDM
College of Dental Sciences & Hospital
Dhavalnagar, Sattur, Dharwad - 580009, Karnataka, INDIA
Recognised by Dental Council of India, New Delhi

SHRI
DHARMASTHALA
MANJUNATHESHWARA
UNIVERSITY

EFFECT OF INTRAORAL SUBMUCOSAL INJECTION OF 8mg DEXAMETHASONE ON POST OPERATIVE MORBIDITY AFTER PERIODONTAL FLAP SURGERY:A CLINICO BIOCHEMICAL STUDY

By

Dr. Vinuth R. Revadigar

Dissertation Submitted to the
Shri Dharmasthala Manjunatheshwara University, Dharwad, Karnataka.

In partial fulfillment
of the requirements for the degree of

Master of Dental Surgery (M.D.S)

in

PERIODONTICS

Under the guidance of

Dr. Monika Goswamy
Professor
Department of Periodontics

Shri Dharmasthala Manjunatheshwara College of Dental sciences and Hospital

Sattur, Dharwad

2020-2023

Shri Dharmasthala Manjunatheshwara University, Dharwad, Karnataka.

ABSTRACT

Background and objectives:

Periodontal diseases are a heterogeneous group of diseases caused by the interaction between supragingival and subgingival biofilms and the host inflammatory response. Their treatment includes a non-surgical and a surgical approach, depending on the severity of the condition. Most of the time, these non-surgical and surgical approaches lead to a favorable outcome with no adverse events, but in few cases, they can lead to certain complications that could alter them. Open-flap debridement (OFD) is an efficient therapeutic approach for patients who do not respond well to non-surgical periodontal treatment. However, pain and discomfort are to be expected after this type of procedure. Several medication protocols have been proposed to minimize these effects. An effective single-dose of preventive drug should work for 24 hours, which is the case with dexamethasone and etoricoxib. Waiting for the onset of pain after surgery to medication leads to unnecessary discomfort and may reduce the effectiveness of subsequent treatment.

Thus, this study was aimed to assess the efficacy of intraoral submucosal injection of dexamethasone on post operative morbidities after periodontal flap.

Materials and Methods:

A total of 36 systemically healthy participants indicated for periodontal flap surgery were inducted into this prospective comparative in vivo study. They were divided into two groups wherein, Test group (Group A) consisted of 18 patients who received 2ml of intraoral submucosal dexamethasone injection (4mg/ml) Control Group B consisted

of 18 patients who did not receive dexamethasone post-surgery. The follow ups were done on 2nd and 7th day. Estimation of oedema, swelling and pain were conducted. Saliva samples were collected pre operatively, day 2, day 7 which were then used for estimation of IL-6 levels to assess the inflammation.

Results:

It showed that there were significant changes observed in oedema from day 0 to day 2and in group A as compared to group B which showed significant changes from day 0to day 7. IL -6 levels showed significant changes from day 0 to day 7 in both groups whereas in group A IL 6 levels did not change significantly from day 0 to day 2 but changes were seen from day 0 to day 7. Group B showed significant changes in IL 6 levels on day 0, day 2 and day 7.

Conclusion:

The results of this study suggest that preoperative intraoral submucosal dexamethasone significantly reduces pain and swelling during the short-term postoperative period whencompared with control.

Keywords: Dexamethasone; periodontal flap surgery; post operative pain; inflammation; swelling and oedema.