



Awareness of Corticosteroids for Third Molar Impaction by Dentists

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ABSTRACT

Objective: *The study was conducted to assess the awareness of corticosteroids for third molar impaction by dentists.*

Materials and methods: *A hundred dental practitioners including all specialities were included in this study, were given a questionnaire containing both open-ended and close-ended questions. The questionnaire comprised information pertaining to corticosteroids prescription for third molar surgery, commonly prescribed corticosteroids, their dosage, etc.*

Results: *In a total of n=100, 72% perform third molar impactions and n=28 do not perform third molar impactions. In 72% performing third molar impactions, 54% prescribe corticosteroids and 18% do not prescribe corticosteroids. In 54% prescribing corticosteroids, 33% prescribe prednisolone(oral) and 21% prescribe dexamethasone. Among 54% prescribing corticosteroids all prescribe after food. The dosage for prednisolone reported is 30 mg orally immediately after surgery, 5 mg orally twice daily for 3-5 days. The dosage for dexamethasone reported is intravenously 4mg and intramuscularly 8mg.*

Conclusion: *It is concluded from the present study that majority of dentists had moderate awareness of corticosteroids reducing post operative swelling and discomfort after third molar impactions. They should follow and should not neglect guidelines for corticosteroids prescription along with NSAIDS*

INTRODUCTION

The most common traumatic procedure in oral and maxillofacial field is third molar extraction. It is usually carried out under local anaesthesia consumes more time than normal extraction^(1,2). The common complications are pain, swelling and trismus⁽¹⁻⁴⁾. As it is a highly vascularized area, it contains more loose connective tissue, thus functional and structural alterations occurs it causes liberation of exudates and subsequent swelling, trismus and pain⁽⁵⁻⁷⁾. Clinicians have stressed upon reducing pain, swelling and trismus in patient who undergo third molar surgery^(8,9). Thus it is necessary to provide an adequate anti-inflammatory therapy^(5,6,7,10-21). Corticosteroids

reduces postoperative complications. Mechanism of action of corticosteroids includes the inhibition of the enzyme phospholipase A2 (PLA 2), it reduces the release of arachidonic acid in the cells of inflamed region. Thus there is decreased prostaglandin's and leukotriene's synthesis, thus reducing accumulation of neutrophils, thus reduces post-operative complications^(5-7,18-20). The aim of study is to assess the awareness of corticosteroids after third molar impactions by dentists

MATERIALS AND METHODS

A 6-item, 1 page questionnaire was distributed to 100 dentists including all specialities.

The questionnaire included demographic details; age, gender, specialty practicing. Main section of questionnaire included questions of practicing

third molar impactions, prescription of corticosteroids, prescribed before or after food, corticosteroid prescribed and its dosage

RESULTS

Table 1: Dentists who perform third molar impactions.

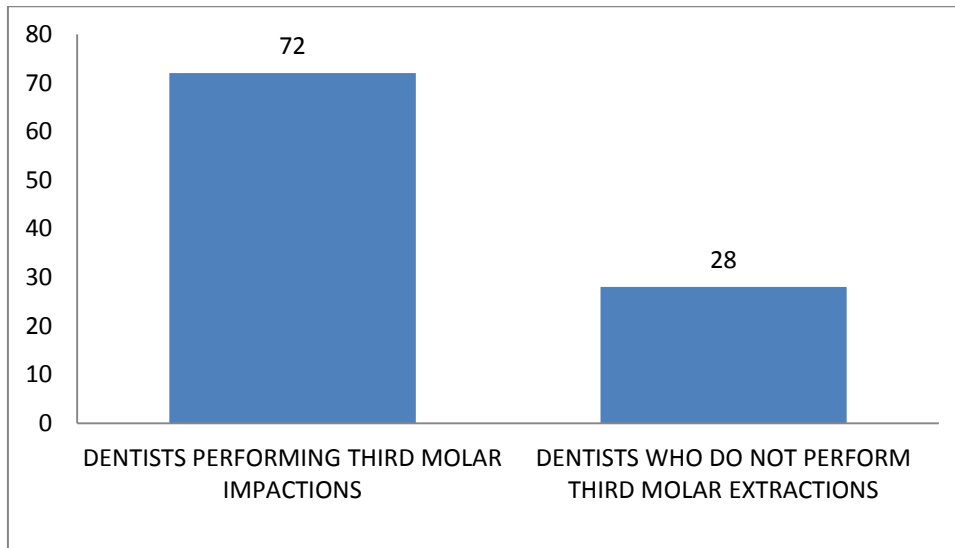


Table 2: Dentists prescribing corticosteroids during third molar impactions

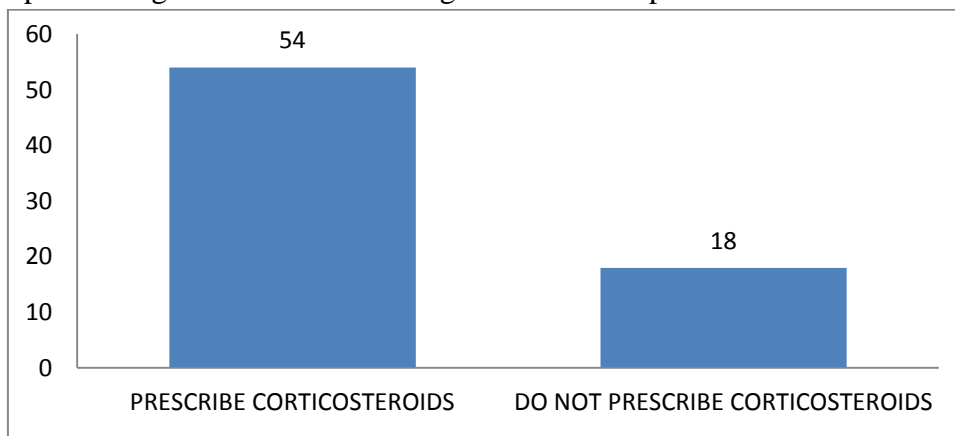
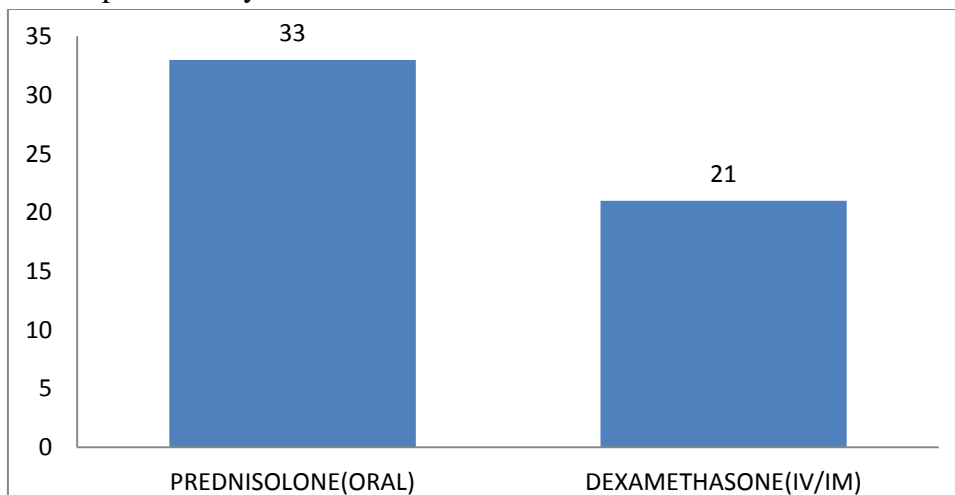


Table 3: Corticosteroid preferred by dentist



Questionnaire was distributed to 100 dentists. In a total of n=100,72% perform third molar extractions and 28% do not perform third molar extractions(table1). In 72% performing third molar extractions, 54% prescribe corticosteroids and 18% do not prescribe corticosteroids(table 2)Majority of dentists prescribe corticosteroids and few do not prescribe. As the others are not aware of the benefits of corticosteroids. In 54% prescribing corticosteroids, 33% prescribe prednisolone(oral) and 21% prescribe dexamethasone (IV/IM) (table 3).More dentists prescribe orally because only few specialties are trained for intravenous and intramuscular injections. Among 54% prescribing corticosteroids all prescribe after food .The dosage for prednisolone reported is 30 mg orally immediately after surgery, 5 mg orally twice daily for 3-5 days. The dosage for dexamethasone reported is intravenously 4mg and intramuscularly 8mg.

DISCUSSION

The current study was conducted to assess the awareness of corticosteroids administration for third molar impaction by dentists. Our study indicates that in 72% performing third molar impaction, only 54% prescribed corticosteroids and the most preferred was prednisolone orally after extraction. Dentists stated that oral administrations were more easy and only surgeons and pediatricians are trained for intravenous or intramuscular injections.

In Oral and Maxillofacial Surgery the most frequent surgery is impaction of third molar surgery^(10-17,5). The immediate symptom is post operative pain and discomfort^(5,6,7,10--21) The direct complication is trismus, which compresses nervous structures and produce pain^(5,7,14,17-21). Intensity or severity of postoperative sequelae such as pain, swelling and trismus may be reduced by pharmacologically controlling the extent of inflammatory process^(22,23). Corticosteroids administration for inflammation is a technique proposed to reduce post operative inflammation. Cortisol and synthetic analogue of cortisol have

the efficiency to disturb the physiological process of inflammation, thus reduces local fever, redness, swelling and tenderness by which inflammation is recognized⁽²²⁾. Another method is to control the synthesis of prostaglandins. In inducing pain, inflammation and fever, prostaglandins play a major role^(3,24). By inhibiting cyclo-oxygenase enzyme system, the bio synthesis of prostaglandins is reduced, this is an important mechanism of NSAIDs⁽²⁵⁾. Therefore co-administration of NSAIDs along with dexamethasone or prednisolone is expected to reduce post-operative pain trismus and swelling more than that of NSAIDs alone^(26,27).

CONCLUSION

A majority of surveyed dentists had moderate awareness of corticosteroids reducing post-operative swelling and discomfort after third molar impaction. As third molar surgery is the most common surgery performed and is often associated with post-operative symptoms like pain, swelling, trismus, edema. Thus dentists should prescribe corticosteroids along with NSAIDs for reducing complications of third molar surgery.

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