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Original Research

Assessment of risk factors of dry socket

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ABSTRACT:

Background: Exodontia is the commonest procedure in oral surgery and dentistry. Dry socket, also referred to as alveolar or fibrinolytic osteitis, is a major complication that follows extraction of tooth/teeth in oral surgery. Hence; the present study was conducted for assessing the risk factors of dry socket. **Materials & methods:** A total of 150 patients were analyzed who underwent dental extraction procedures. All the procedures were carried out under local anaesthesia. Adequate medical history was obtained of all the patients prior to the surgery. Postoperative follow-up was done and incidence of dry socket was evaluated. Proper history was obtained among these patients and risk factors of dry socket were assessed. **Results:** Dry socket was seen in 16 percent of the patients. Positive tobacco smoking history was seen in 50 percent of the patients. Females with history of use of oral contraceptives were seen as risk factors in 37.5 percent and 20.83 percent of the patients respectively. **Conclusion:** The factors associated with dry socket were tobacco history, oral contraceptives, gingival infection and traumatic extraction.

Key words: Dry Socket, risk factors

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INTRODUCTION

Exodontia is the commonest procedure in oral surgery and dentistry. Most patients have to contend with moderate to severe pain over varying periods from not only the indications of these extractions but also the fear of pain from having an extraction which might have been avoided. Occasionally, fears of such patients actually result in real or perceived pain during extraction depending on the skill of the clinician. Some may also have severe pain immediately postoperatively and this may continue for several days after the procedure. Dry socket, also referred to as alveolar or fibrinolytic osteitis, is a major complication that follows extraction of tooth/teeth in oral surgery. It is an acute inflammation of the alveolar bone around the extracted tooth and it is characterized by severe pain, breakdown of the clot formed within the socket making the socket empty (devoid of clot), and often filled with food debris.¹⁻³ Many factors contribute to the occurrence of dry socket. For example: low experience level of operator preoperative infection, sex, site of extraction, use of oral contraceptives, smoking, and use of local anesthetics with vasoconstrictor.⁴⁻⁷ Hence; the present study was conducted for assessing the risk factors of dry socket.

MATERIALS & METHODS

The present study was conducted for assessing the risk factors of dry socket. A total of 150 patients were analyzed who underwent dental extraction procedures. All the procedures were carried out under local anaesthesia. Adequate medical history was obtained of all the patients prior to the surgery. Postoperative follow-up was done and incidence of dry socket was evaluated. Proper history was obtained among these patients and risk factors of dry socket were assessed. All the results were analyzed by SPSS software.

RESULTS

A total of 150 patients were analyzed. Out of these 150 patients, dry socket was seen in 16 percent of the patients. Positive tobacco smoking history was seen in 50 percent of the patients. Females with history of use of oral contraceptives were seen as risk factor in 25 percent of the patients. Traumatic extraction and gingival infection of associated region were seen as

risk factors in 37.5 percent and 20.83 percent of the patients respectively.

Table 1: Incidence of dry socket

Variable	Number	Percentage	
Dry socket	24	16	
Total extractions	150	100	

Table 2: Risk factors of dry socket (n=24)

Risk factors	Number	Percentage
Tobacco smoking history	12	50
Females with history of use of oral contraceptives	6	25
Traumatic extraction	9	37.5
Gingival infection of associated region	5	20.83

DISCUSSION

By the third day postextraction, pain due to extraction is expected to have subsided appreciably, but when such pain becomes worse and continues through one week after the procedure and the socket does not appear to be healing, the occurrence of dry socket can be established. Incidence of dry socket has been reported in literature to be about 0.5-5.6% and following surgical extraction of third molars, it has been found to be up to 30%.⁶⁻⁹ Hence; the present study was conducted for assessing the risk factors of dry socket.

A total of 150 patients were analyzed. Out of these 150 patients, dry socket was seen in 16 percent of the patients. Positive tobacco smoking history was seen in 50 percent of the patients. Abu Younis MH et al assessed the frequency, clinical picture, and risk factors of dry socket. The overall frequency of dry socket was 3.2%. The incidence of dry socket following non-surgical extractions was 1.7% while it was 15% following surgical extractions (P< 0.005). The incidence of dry socket was significantly higher in smokers (12%) than in non-smokers (4%) (P <0.005), however, there is a strong association between the amount of smoking and the incidence of dry socket (P < 0.002). The incidence of dry socket was significantly higher in the single extraction cases (13%) than in the multiple extraction cases (5%) (P =0.005). Smoking, surgical trauma and single extractions are considered predisposing factors in the occurrence of dry socket. On the other hand, factors like: age, sex, medical history, extraction site, amount of anesthesia, and operator experience have no effect on the observation of dry socket.¹⁰

In the present study, females with history of use of oral contraceptives were seen as risk factor in 25 percent of the patients. Traumatic extraction and gingival infection of associated region were seen as risk factors in 37.5 percent and 20.83 percent of the patients respectively. Akinbami BO et al investigated the incidence of dry socket. Patients who were referred for dental extractions were included in the study. The case files of patients were obtained and information retrieved included biodata, indication for extraction, number and type of teeth extracted, oral hygiene status, compliance to oral hygiene instructions, and development of dry socket. One thousand, one hundred and eighty two patients with total of 1362 teeth extracted during the 4-year period of the study were analyzed, out of which 1.4% teeth developed dry socket. The mean age (SD) was 35.2 (16.0) years. Most of the patients who presented with dry socket were in the fourth decade of life. Mandibular teeth were affected more than maxillary teeth. Molars were more affected. Retained roots and third molars were conspicuous in the cases with dry socket.¹¹

CONCLUSION

The factors associated with dry socket were tobacco history, oral contraceptives, gingival infection and traumatic extraction.

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