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Research Article

STUDY TO KNOW THE FREQUENCY OF DRY SOCKET IN LOWER JAW (A RETROSPECTIVE STUDY)

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Abstract:

***Objective:** The aim of this study was to determine the dry socket incidence after extraction in the lower jaw.*

***Study design:** A Retrospective Study.*

***Location and Duration:** In the Oral and Maxillofacial Surgery (OMS) of Nishtar Institute of Dentistry, Multan for three year period November 2015 to November 2018.*

***Methods:** Hospital records of all patients who underwent a tooth extraction with a forceps I were examined to determine the complications of the dry socket. Patients who were medically compromised and third molar extraction patients were excluded from the study.*

***Results:** During a total of 32811 simple tooth extractions in the three-year period, 1163 (3.5%) of the extraction cases, 696 (2.1%) of the lower jaw and 467 (1.4) were exposed to a dry socket. %) at the top; the difference between the lower and upper limits was statistically significant ($p = .0001$). The mean age of the patients with dry socket was 33 to 17 years. 1163 patients with dry socket; 429 were male and 734 were female; A ratio of 1: 1.7 is shown ($p.0001$).*

***Conclusion:** It was concluded that the incidence of dry jaw was significantly higher in the lower jaw than the upper jaw ($p = 0001$). Similar; the incidence of dry intake was significantly higher in women than in men.*

Key Words: dry socket, tooth extraction, lower jaw.

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INTRODUCTION:

Among the common complications of tooth extraction, dry socket is a rare local and painful postoperative complication occurring within 72 hours of approximately 3% of simple traction cases. 25-30% cases were reported after the surgical removal of the third molars [1]. The recovery of the blood clot in the extraction socket is unexpectedly removed and leaves an open and painful area. The technical term for this condition is acute alveolar osteitis. In general, dry mouth pain is intense, throbbing and not continuous. This pain is usually worse than tooth-related pain before tooth extraction. A bad smell can be associated with this condition [2]. Pain medications often serve to relieve the condition associated with this condition³. Dry socket treatment problem among dentists is still observed. It consists of three stages: irrigation (as antiseptic and debridement), placement of clogged dressings (bactericidal / bacteriostatic) and administration of oral analgesics; generally, no antibiotics are recommended, because there is no infection [4]. Some authors do not recommend alveolar curettage to force or induce bleeding in the necrotic socket due to the risk of producing a secondary infection. Crawford first reported the incidence of dry intake in the literature in 1867 [5]. Although the etiology of dry intake is still controversial, it is probably a multifactorial with an unknown pathogenesis. It is not appropriate to define a factor as the cause of this painful condition. There are a number of factors for pre-placing an extraction condition to develop a dry socket; Hypovascularity due to bone density, local inflammation due to soft and hard tissue trauma, vasoconstriction activity of local anesthesia, complex tooth extraction and gargling after extraction. In addition, the condition of oral hygiene with sex and age contributes to the formation of dry society [6]. In local anesthesia, vasoconstrictor is associated with dry mouth because they cause ischemia and fibrinolytic activities. Some studies have shown that dry socket occurs more than maxillary teeth due to the hard bone pattern and insufficient blood supply in the removal of mandibular teeth [7]. The frequency of dry socket was reported to be higher by molars,

especially first and third teeth, followed by premolar, incisors and other teeth. A recent study has shown that mandibular teeth are affected three times more than upper teeth. Reports on the incidence of dry intake in Pakistani societies are rare [8]. Therefore, the aim of this study was to determine the incidence of dry socket in the lower arch at a Dental Training Hospital in Pakistan.

MATERIALS AND METHODS:

This Retrospective Study was held in the Oral and Maxillofacial Surgery (OMS) of Nishtar Institute of Dentistry, Multan for three year period November 2015 to November 2018.

The records of 32,811 extraction patients were evaluated retrospectively during the three-year study period, among them 15046 men and 17765 women. The average age ranges were between 33-49 years. 2% local anesthetic xylocaine was used in all patients (1: 80,000 with adrenaline). Patients with a history of systemic disease were excluded from the study. Most of the cases were forceps / levator extractions. A few cases, such as the remaining roots, endo-treated and widely decayed teeth, were removed by surgical envelope with the surgical flap and the reflection of the tooth portion without a planned operation. The sterilization criterion was the same for all cases. The dry socket was diagnosed when patients complained of a painful extraction street that started 2-4 days after extraction. Clinical examination of cavities has shown that the gaps are empty or emerge with bare bone and debris discharged. Statistical analysis for the social sciences (SPSS version # 18) was used for data analysis. Chi-square test was used to determine a significant difference in jaw, sex, mouth and tooth groups.

RESULTS:

In a three-year period between 32811 simple tooth extractions, 1163 (3.5%) extraction cases were of dry socket 696 (2.1%) in the lower jaw and 239 (1.6%) were males and 457 (2.6%) women] 467 (1.4%) in the upper jaw [190 (1.3%) in men and 277 (1.6%) in women].

TABLE 1: INCIDENCE OF DRY SOCKET IN UPPER AND LOWER JAW

P=nder	Upper Jaw Dry Socket		Lower Jaw Dry Socket	
	Yes	No	Yes	No
Male	190 (1.3%)	14856 (98.7%)	239 (1.6%)	14807 (98.4%)
Female	277 (1.6%)	17488 (98.4%)	457 (2.6%)	17308 (97.4%)
Total	467 (1.4%)	32344 (98.6%)	696 (2.1%)	32115 (97.9%)

P= 0.000

The difference in the dry socket formation between the lower and the upper jaw was statistically significant ($p = .0001$) (Table 1). 1163 patients with dry socket; 429 were male and 734 were female; Showing the ratio of 1: 1.7. The gender difference in dry socket incidence was statistically significant ($p = .0001$) [Table 2].

TABLE 2: DRY SOCKET CASES BY GENDER

Gender	Dry Socket Cases	No Dry Socket
Male	429 (2.9%)	14617 (97.1%)
Female	734 (4.1%)	17031 (95.9%)
Total	1163 (3.5%)	31648 (96.5%)

P=.0001

The incidence of dry socket i.e. molars, premolars, etc. on right side of mouth (Table 3). The incidence of dry socket was higher in molars, followed by premolar and incisors.

TABLE 3: DRY SOCKET DISTRIBUTION IN TERMS OF MOUTH SIDE AND TOOTH GROUP

Teeth	Side	Upper Jaw	Lower Jaw
Molars	Right	123 (26.34%)	217 (31.18%)
	Left	98 (20.99)	194 (27.87%)
Premolars	Right	73(15.63%)	112(16.09%)
	Left	86 (18.42%)	99 (14.22%)
Incisors	Right	38 (8.14%)	38 (5.46%)
	Left	44 (9.42%)	36 (5.17%)

The incidence of dry socket on the right side of the mouth was higher in the upper and lower jaws compared to the left side. But all these differences were not statistically significant. All the extraction with the complication of dry intake was carried out by undergraduate and graduate students. But there were no differences in terms of operator (university and undergraduate surgeons).

DISCUSSION:

In a three-year period between 32811 simple tooth extractions, 1163 (3.5%) extraction cases in 696 (2.1%) men in the lower jaw [239 (1.6%) and 457 (2.6%) women] 467 (1.4%) in the jaw [190 (1.3%) in men and 277 (1.6%) in women]⁹. The difference in the dry socket formation between the lower jaw and the upper jaw was statistically significant ($p = .0001$) [Table 1]. 1163 patients with dry socket; 429 were

male and 734 were female; Showing the ratio of 1: 1.7. The gender difference in dry socket incidence was statistically significant ($p = .0001$) [Table 2]. The incidence of dry socket is also a group of teeth, i.e., molars, premolar, etc. and next to the mouth (Table 3). The incidence of dry socket was higher in molars, followed by premolar and incisors¹⁰. The incidence of dry socket on the right side of the mouth was higher in the upper and lower jaws compared to the left side. But; all these differences were not statistically significant¹¹⁻¹². All the extraction with the complication of dry socket was carried out by undergraduate and graduate students. But; there were no differences in terms of operator (university and undergraduate surgeons). This study showed that there were more dry socket cases in female patients than in men (1.7: 1). The same results of female superiority (1.4: 1 and 1.08: 1) were observed in previous studies. Oral contraceptives and female sex were associated with dry socket frequency. Estrogens and other drugs indirectly stimulate the fibrinolytic system (increasing factors II, VII, VIII, X and plasminogen) contribute to the early destruction of coagulation and the development of the dry socket. These changes in endogenous estrogens during the menstrual cycle are described as 23-28. It has the effect of reducing fibrinolytic system in days¹³. It is believed that dry socket may affect women in a 5: 1 ratio according to male gender, and is more common among oral contraceptive users. A systematic review concluded that women using oral contraceptives have a higher risk of dry cavity than those who do not use these drugs¹⁴. The current was primarily related to the frequency of dry socket after simple exposures; and molars showed a higher dry clearance than all other teeth. Studies have reported a higher incidence of dry cavities after surgical extraction, compared to simple extractions; others reported a higher incidence of dry cavities than other teeth after molar extraction¹⁵. In a recent study, a dry socket frequency of 20 to 30% was reported after removal of the third molars, almost ten times greater than other tooth extracts. The observed variability may be due to differences in the experience of the surgeons, the opening or position of the third molar, the surgical procedure and the duration of the operation.

CONCLUSION:

It can be concluded that dry socket incidence is significantly higher in the lower jaw than the upper jaw; and the incidence was significantly higher in women than in men.

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