

PREVALENCE OF DRY SOCKET RELATED TO GENDER AND SITE

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ABSTRACT

The aim of this study was to assess the prevalence of dry socket in association with gender, site and age. This study includes hundred consecutive patients with dry socket coming to the OPD at Oral Surgery Department, Khyber College of Dentistry, Peshawar. A comprehensive proforma was formulated and filled for comparison of gender, age and site in relation to dry socket. The results of this comparative study were analyzed through chi-square test. Females were 2.37 times more prone to dry socket as compared to males. Whereas, dry socket was found 2.94 times more common in mandibular extractions as compared to maxillary. It was less common in young age group (18%) as compared to older patients (67%).

Key words: Pain, dry socket, alveolitis

INTRODUCTION

The term Dry Socket (Alveolar Osteitis) is attributed to an American dentist James Young Crawford who in 1896 used the term to describe a socket that was devoid of the blood clot and associated with pain.¹

It is a common complication of tooth extraction.²⁻⁸ It is associated with pain and inflammation of the socket wall. Neither its etiology is confirmed nor there is complete agreement on method of treatment. Various names are used for this painful post-operative condition such as localized osteomyelitis, alveolitis, and alveolitis sicca dolorosa etc.

No clear etiology has been acknowledged; however, numerous risk factors have been proposed and tested. The incidence of alveolar osteitis was 2% of all teeth extracted², with 3.9% of all patients experiencing alveolar osteitis in a public dental setting.³ Multivari-

ate analysis revealed operator experience, perioperative crown and root fractures, periodontal disease, posterior teeth, and, interestingly, the use of mental health medications to be significant independent risk factors for the development of alveolar osteitis. No alveolar osteitis was reported in patients taking antibiotics, the oral contraceptive pill, bisphosphonates, or oral steroid drugs.⁹

MC Gowan, Sward and Harris divided the etiological factor into two types infective and vascular. They rejected the concept of washing out of the clot from the socket by the patient as the clot adheres quite firmly to the socket wall. They say that if the patients dislodge the clot, there would be further hemorrhage not an empty socket.⁴

Gabler reported that patient waiting for oral surgery had increased level of circulating level of fibrinolysins. This fibrinolysins causes the lysis of the blood clot.⁴

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In one study, a totally different etiology of dry socket has been reported. It says that proximity of a root apex to the mandibular canal could significantly increase the incidence of dry socket. The extraction of mandibular molar may be a possible cause for reactivation and recurrence of the Herpes Simplex Virus, which could contribute to the development of dry socket.⁸

METHODOLOGY

This study was conducted in Oral & Dental Hospital of Khyber College of Dentistry, Peshawar from September, 2003 to September, 2004. The study design was comparative. The sampling size was of 100 patients and sampling technique was non probability (Convenience). Patients above 14 years of age and belonging to Peshawar district were included in the study. Patients with ulcerative gingivitis, Paget disease, osteopetrosis and those on radiation therapy for the treatment of malignancy were excluded.

All those patients who reported to the OPD of Oral and dental Hospital of Khyber College of Dentistry, Peshawar with post extraction pain were scrutinized. The name of patient, age, gender, history of traumatic extraction, history of diabetes, clinical findings about oral hygiene and pre-extraction oral diseases like pericoronitis and ulcerative gingivitis were recorded in printed proforma. Patients were evaluated for throbbing pain (started 2-3 days after extraction, localized or radiated to other areas), and the condition of the socket (looked dusky red, empty or full of necrotic clot). Periapical radiograph was taken to rule out the broken-down root or any foreign body.

RESULTS

The results regarding the genderwise frequency, site distribution, teeth and age wise distribution are shown in table 1-4.

TABLE 1: GENDER WISE FREQUENCY OF DRY SOCKET

S NO	GENDER	(+)VE CASES	(—)VE CASES	TOTAL	% OF +VE CASES
1	Female	56	13	69	74%
2	Male	20	11	31	26%
TOTAL		76	24	100	100%

TABLE 2: SITE DISTRIBUTION

S NO	SITE	+VE CASE	-VE CASES	TOTAL	% +VE CASES
1	Mandible	59	13	72	78%
2	Maxilla	17	11	28	22%
TOTAL		76	24	100	76%

TABLE 3: TEETH WISE DISTRIBUTION

S No	Site	1 st Molar	2 nd Molar	3 rd Molar	Pre Molar+Canine	Total
1	Mandibular	22(29%)	9 (12%)	19 (25%)	4(5%)	54(71%)
2	Maxillary	8 (11%)	10 (13%)	0 (0%)	4(5%)	22(29%)
TOTAL		30 (40%)	19 (25%)	19(25%)	8(10%)	76(100%)

TABLE 4: AGE WISE DISTRIBUTION

S NO	AGE (YEARS)	NO OF CASES	TOTAL
1	<20 Y	11(14%)	11(14%)
2	21-40 Y	51(67%)	51(67%)
3	>40 Y	14(18%)	14(18%)
TOTAL		76 (100%)	76(100%)

DISCUSSION

Numerous literature references have suggested risk for dry socket associated with female gender, due to the use of oral contraceptive. This risk may be reduced by considering hormonal cycle when scheduling elective exodontias. According to the Buttler the incidence of dry socket is 4% in female while 0.5% in

male.⁹ The over all incidence is about 1-5 % and for lower third molar it is 0.5-16.6% for different age and sex group.¹

In the study conducted at Kula Lumpur⁵ (Malaysia), the frequency of Dry Socket was greater in females (i.e.51.9%) than males. In this study too, the frequency of dry socket was also greater in females but the percentage of female cases was higher (i.e. 74 %).

According to the Buchanan , the frequency of Dry Socket in mandibular extraction is greater as compared to Maxillary extraction. This study also shows the same result, i.e. 78% in Mandible and 22% in the maxilla.¹

The number of cases of Dry Socket is greater in mandibular 3rd molar extraction in both the above-mentioned studies while in the present study, the frequency was more in lower 1st molars Table 3.

The incidence of Dry Socket was greater between the ages of 20—40 years.^{10,11} In this study the frequency of dry socket was also greater in this age group.

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