antibodies that can bind the therapeutic antibody, but are often irrelevant. If we suppose that immunogenicity is an important factor that should be considered in the overall treatment strategy, we should take actions to reduce antidrug antibodies formation: modifying drug administration; increasing dose; decreasing immunogenicity by adding immunosuppressive agents to the regimen or using new drugs which are supposed to be less immunogenic such as humanized or fully human monoclonal antibodies.

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Evaluation of influencing factors (age, sex, number of teeth, type and quality of teeth) on the development of dry socket (alveolar osteitis) after tooth pull (clinical study)

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Abstract

A dry socket (alveolar osteitis) is a painful dental condition that sometimes happens after you have a permanent adult tooth pulled. Dry socket is the most common complication following tooth pull, such as the removal of third molars (wisdom teeth). Over-the-counter medications alone won't be enough to treat dry socket pain. Your dentist or oral surgeon can offer treatments to relieve your pain. In this study, we investigated the influential factors (age, sex, number of teeth, type, and quality of teeth) on the formation of the dry socket after tooth pull (as a clinical study) and analyzed each of the factors. This research was conducted in the Russian federation in 2018-2020 as a case study.

Keywords: Dry socket, dentistry, alveolar osteitis, case study.

1. Introduction

A dry socket (alveolar osteitis) may be a painful inflammation that will develop within the jawbone's open tooth socket after a tooth has been removed [1]. Dry sockets often develop after pull and are more common after pull of the third molars, or wisdom teeth removal. (Fig.1 and 2).

Figure.1. A dry socket (alveolar osteitis) in mandibular

Figure.2. dry socket

The authors also present a model of the causes of dry socket lesions based on current experimental knowledge. There is uncertainty in the dental literature about what causes dry socket lesions [2,3,4]. Although some factors, such as smoking, oral contraceptive use, and the presence of fibrinolytic activity in post-pull sockets correlate with an increased incidence of dry socket, a definitive mechanism for explaining dry socket pathogenesis remains elusive.

2. Materials and methods:

In this study, 495 patients who went to a private office for tooth pull (Med Amulet Clinic, Moscow, Russia, and the School of Dentistry) from 2018 to 2020 were examined on several factors. Some patients had more than one tooth pulled at each visit. Patients' information was recorded in terms of age, sex, and number of teeth pulled each time. And all patients have records. The duration of tooth pull was divided to areas (less than 5 minutes = easy, 5-10 = medium, more than 10 minutes = difficult).

All patient information was recorded, including medical history, surgery, dentistry, and specific medications. Patients were examined by telephone two to three days later (for pain and other problems).

3. Results:

Over the 2 years, 788 teeth were taken from the 496 patients investigated, and 20 patients had 23 dry sockets detected. Twelve dry sockets were generated in 340 patients who had only one tooth pulled (2.73 %), while 11 dry sockets were created in 156 patients who had more than one tooth pulled in one stage (447 teeth). That is, it was found in 2.9% of the population.

Figure3

The incidence of dry socket teeth due to tooth extraction to separate anatomical position:

The position of the teeth	Incidence of dry socket
Bites and stings	1.4
Small down mills	2.9
Small high mills	1.1
Large mills down	5.9
Large high mills	1.8
the roots	1.3

Age: Shows dry sockets and their occurrence at different ages. The highest figure was between 22 and 35 years old in men (7%) and 50-65 years old (8.2%) in women.

Location of tooth pull: The incidence of dry sockets has been studied according to the anatomy of the teeth in terms of maxilla and mandible, based on which 17 dry sockets have been pulled from 377 teeth, that is (5.1%) in the mandible and 6 cavities. Dry consisting of 410 pulled teeth in the maxilla (1.5%).

In this study, the incidence of dry sockets in easy (1.8%), slightly difficult (2.3%), and completely difficult (6.1%) conditions were obtained.

4. Discussion

After the socket heals, a dry socket lesion may exhibit exposed bone situated superior to the expected placement of the occlusal surface of the socket. This bone could be a projecting septum or it could be on the occlusal edge of the socket. This superiorly-located exposed bone would be the last aspect of the socket to be covered by epithelium, since the bone, protruding superiorly to the projected occlusal surface of the healed socket, would be exposed to food particles or mechanical trauma that may erode epithelium growing over that bone. This bone, if mechanically stimulated, would be a source of acute pain until the end of the healing period [5-8]. A dentist may anesthetize the patient and use a football diamond bur with copious irrigation to trim this bone to approximately 1 mm inferior to the projected occlusal surface of the healed pull socket. Such trimming can result in the bone becoming immediately coverable by a blood clot or medicament, thereby reducing the total number of days that this hyper-sensitive bone is exposed and helping to ensure that epithelium will systematically grow over the remaining exposed bone of the dry socket. If the protruding

bone is located on the socket occlusal perimeter, the dentist can reduce the bone to a level that is inferior to the occlusal aspect of the gingival tissue located just lateral to the protruding bone. If the gingiva on the socket occlusal perimeter is superior to all of the socket bone, a socket blood clot or dry socket medicament is more likely to cover the bone.

The incidence of dry sockets due to tooth pull was 3.1% in 787 cases. These results showed that there was not much difference between pulling one or more teeth in one step in terms of dry socket incidence. It has also been shown that there is a difference in the incidence of dry sockets in men and women and the reason for its prevalence in women is the use of pregnancy drugs.

The highest incidence of dry sockets was 7% in men and in the age group of 22-35 years. While in women it was 55-65 years old. (6.9%). These results are acceptable because few women over the age of 60 presented, which is consistent with the results of previous research by other scientists.

The incidence of dry sockets is also related to the location of the pulled tooth. For example, the incidence of dry sockets is in the mandible (5.1%) and the maxilla (2.1%). Also, the most common teeth for dry sockets are the maxillary molars, the mandibular molars, the maxillary molars and molars, which are similar to and consistent with the findings of other scientists [9-11]. Dry Socket teeth that are more apex infection.

5. Conclusion:

The reason for the increase in the incidence of dry sockets in the pull of difficult teeth that have been done for a longer period is not due to trauma but due to excessive mouthwash after tooth pull; This is because it will kill the blood clot and infect it with saliva, and thus the oral bacteria will cause a dry socket by removing the fibrin around the bone.

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