

Alveolar Osteitis

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Abstract: Dry socket is one of the complications after extraction of teeth. In this article we have reviewed the literature regarding the various options for the management of dry socket. We conclude that Antibiotic prophylaxis is the best way in the prevention and management of dry socket.

I. Introduction

Dry socket is also called alveolar osteitis . It is a painful inflammatory infection of bone and tissues at the site of extracted tooth. It is the inflammation of alveolar bone. Classically occurs as post operative complication of tooth extraction.

1.1. Background

Dry socket is a complication of dental extraction and occurs more commonly in extractions involving mandibular molar teeth. It is associated with severe pain developing 2 to 3 days post operatively, a socket that may be partially or totally devoid of blood clot and in some patients there may be a complaint of halitosis.

1.2. Objective

To assess the options in the management of dry socket following tooth extraction.

1.3. Prevalence

Overall it occurs in 0.5 to 5 % of routine dental extractions and in 25 to 30% of impacted mandibular third molar surgeries.(4). Females are more affected than males due to the usage of contraceptives. Mostly mandible is more affected than maxilla (1)

1.4. Etiology

Bacterial infection- Treponema Denticola, Trauma, poor blood supply, bio-chemical agents, fibrinolytic activity which affects the integrity of the blood clot, thrombus formation.

1.5. Predisposing factors

Pre-operative

Mandible- Less blood supplied when compared to maxilla, pre-existing infections, smoking , periodontal disease, acute necrotizing gingivitis, paget's disease, osteopetrosis, cemento osseous dysplasia, history of inadequate oral hygiene, vasoconstrictors, radio therapy.

Post Operative

Forceful spitting, smoking, sucking through a straw (negative pressure), coughing, sneezing.

1.6. Patho Physiology:

Blood clots fails to form or lost from the socket after extraction -> Leaves an empty socket -> Bone is exposed to oral cavity -> Alveolar Osteitis.

1.7. Clinical features

Partial or total disintegrated blood clot within the extraction socket, very sensitive and painful, presence of debris or foreign bodies within the socket, redness of the gums around the socket, halitosis, unpleasant taste in the mouth, no fever or lymph node enlargement.

1.8. Diagnosis

Severe and persistent pain arising 24 to 48 hours following tooth extraction localized to the extraction socket which is sensitive to even gentle probing. Typically the pain radiates to the ear, absence of post extraction blood clot, halitosis, trismus.

1.9. Treatment

Analgesic medication, irrigation with saline/LA, medicated dressing eg ZnOE, antibiotic prophylaxis

II. Review Of Literature

A systematic review reported that rinsing with chlorhexidine solution (0.12% or 0.20%) or placing chlorhexidine gel (0.2%) in the socket of extracted teeth reduces the frequency of dry socket (2). Another systematic review concluded that prophylactic antibiotic reduces the risk of dry socket (3). There is another evidence that antifibrinolytic agents applied to the sockets after extraction may reduce the risk of dry sockets (2). Some dentists suggests routine debridement of bony walls of the socket to encourage bleeding. It is suggested that teeth to be extracted be scaled prior to the procedure (5). Medicated dressings are also commonly placed in the socket eg Zinc Oxide and eugenol, Bismuth Sub nitrate and Iodoform paste (2).

2.1. Inference

12 clinical trials using chlorhexidene gel (0.2%) with different administration regimens for prevention of dry socket were identified. It is applied every 12 hours for 7 days after extraction (6). Antibiotic preparations placed into the socket after extractions – tetracycline – impregnated gelatin sponges (7), clindamycin impregnated gel foam and systemic use of metronidazole and penicillins (8) and erythromycin. Eugenol dressings – ZNOE were uses in another treatment.

III. Conclusion

As chlorhexidene gel treatment is expensive and eugenol is neuro toxic (interrupts the neural transmission and creates allergy andhas long term complications) (9). It is recommended that antibiotic prophylaxis is the best way of managing dry socket.

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