

PERICORONITIS- A review

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Abstract:-

Pericoronitis is defined as the inflammation around the occlusal surface of partially or completely erupted mandibular third molar. It is a common situation, where every oral surgeon experiences in their day to day practice. This article discusses about the etiology, treatment plan and its maintenance.

Key words: *Pericoronitis, operculectomy , occlusal trauma, electrosurgical loop*

Introduction:-

Pericoronitis or operculitis is an acute or chronic periodontal inflammation around the occlusal surface of partially or completely erupted mandibular third molar, which is seen most commonly around 20 to 29 years of age, rarely seen before 20 or after 40. It can be either acute or chronic. Acute pericoronitis is characterized by cardinal signs of swelling , namely rubor, dolor, calor , tumor indicating redness, pain, increased temperature and swelling around the region. Acute pericoronitis is of short duration characterized by pain, redness, swelling. Acute pericoronitis is due to microbial accumulation beneath the flap, resulting in putrescent odor causing halitosis due to poor oral hygiene. Chronic pericoronitis is due to soft tissue trauma covering the occlusal surface of partially or completely erupted mandibular third molar which is traumatized by the cusps of the opposing maxillary third molar, done repeatedly and for a long duration. The symptoms associated with chronic pericoronitis are swelling, pus discharge, which progresses to mandibular space infection.

Discussion:-

Risk factors of pericoronitis:-

- ✓ Poor oral hygiene
- ✓ Previous history of pericoronitis
- ✓ Presence of partially erupted or unerupted mandibular third molar
- ✓ Respiratory infections and tonsillitis

Etiology:-

The most common cause of pericoronitis is entrapment of food debris and plaque between the crown and the overlying operculum. This constant entrapment of plaque and food debris leads to inflammation, which aggravates pain, redness, occlusal trauma and also leads to release of inflammatory fluid and cellular exudate. This causes incomplete closure of jaw due to the opposing cusps of normally erupted or supra erupted maxillary third molars. Chronic condition is characterized by varying degrees of ulceration. It is also related to systemic conditions like upper respiratory tract infections like tonsillitis, influenza and stress leading to immunocompromised state.

Clinical features :-

Acute pericoronitis is characterized by pain, swollen, red, suppurating lesion , tender & throbbing in nature and radiates to ear, temporomandibular joint and posterior submandibular region, making the patient unable to

sleep. Patient also complains of dysphagia, halitosis, putrescent odor and inability to close the jaws. Trismus is seen along the swelling of cheek in the angle of jaw. Signs of trauma in operculum such as indentations of cusps of upper teeth leading to ulceration. This leads to systemic conditions like pyrexia, leukocytosis, regional lymphadenopathy with a diffuse spread to tissue spaces. Chronic pericoronitis is characterized by dull pain, which lasts for few days with recurrence of symptoms lasting for months. An ulceration can occur in association with chronic pericoronitis, resembling acute necrotizing ulcerative gingivitis, complaining of bad taste. Pregnancy and fatigue are associated with increased occurrence of pericoronitis. Radiographic appearance of bone shows increased radio-opacity in chronic pericoronitis.

Microbiology:-

The bacterial species which are predominant in pericoronitis in mandibular third molars are Streptococcus, Actinomycetes and Propionibacterium. The bacterial species of pericoronitis are anaerobic. The colonizing bacteria seen in pericoronitis are similar to those in tonsillitis and periodontitis. According to leung, the microbiota found in pericoronitis are similar to those found in gingivitis, periodontitis. Polymerase chain reaction has been shown to be a highly sensitive and specific test for detection of periodontopathogens in pericoronal flap.

Histopathology:-

There is a presence of hyperplastic epithelial lining of pericoronal flap with intercellular edema and leukocytic infiltration along with increased vascularity underneath epithelium. There is also presence of polymorphonuclear leukocytes within connective tissue of inflamed pericoronal flap.

Complications:-

Pericoronitis is a painful condition leading to serious entity, if left untreated progresses to pericoronal abscess. The infection spreads medially to base of tongue, posteriorly to oropharynx. Depending upon the severity, the infection spreads to lymph nodes. The sequelae of acute pericoronitis are peritonsillar abscess or quinsy, cellulitis and Ludwig's angina, requiring hospitalization and can be a life threatening situation.

Management:-

When the condition is due to supra-erupted maxillary third molar, it should be extracted.

Various treatment options for treating pericoronitis are:-

- ✓ Conservative method
- ✓ Surgical removal of overlying flap

Conservative method:-

This method involves irrigation of the pericoronal space with warm saline to flush away the food debris using a 10cc syringe of 20 gauge needle.

The other irrigating solutions are:-

- ✓ Phenol 5% 6cc
- ✓ Tincture of aconite, 12cc
- ✓ Tincture of iodine, 18cc
- ✓ Glycerin, 24 cc

Elevate the flap gently from the tooth with scaler and curette and swab the area with an antiseptic.

If pericoronal abscess is present, make an incision anteroposteriorly with a no.15 BP blade to establish drainage.

If pericoronitis is severe or systemic symptoms are present, antibiotics, namely, either metronidazole 400mg twice a day for five days or penicillin 500mg thrice a day for five days. Patients allergic to penicillin are advised to take erythromycin 500mg thrice a day for five days is suitable.

Surgical removal of overlying flap:-

The surgical removal of overlying flap is called as operculectomy. The tissue overlying the occlusal surface of lower third molar tooth is a dense fibrous one called as operculum. The inflamed tissue is called as operculitis infiltrated with inflammatory cells. It is removed with help of electrosurgical scalpel or radiosurgical loop. These instruments coagulates the small capillaries and improves the visibility of the field , where the tissue is removed carefully and the tooth is allowed to erupt to its functional position, when located properly. This procedure is performed when the pericoronitis is severe and cannot be resolved by antibiotic and analgesic therapy. Appropriate oral hygiene instructions should be given to the patient for long term maintenance.

Conclusion:-

Pericoronitis , though looks small, should be considered as a serious one and should be diagnosed early and treatment should be instituted as soon as possible with thorough history, examination, and radiographic assessment. Depending on the severity, treatment should be implemented on an emergency basis.

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