

# Pericoronitis

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When a tooth is partially impacted with a large amount of soft tissue over the axial and occlusal surfaces, the patient frequently has one or more episodes of pericoronitis. Pericoronitis is an infection of the soft tissue around the crown of a partially impacted tooth and is usually caused by normal oral flora. In most patients, bacteria and host defenses maintain a delicate balance, but even normal host defenses cannot eliminate the bacteria.



Pericoronitis in area of impacted tooth #32 exhibiting classic signs of inflammation with erythema and swelling. If opposing tooth #1 is erupted, it commonly impinges on this area of swelling when teeth are brought into occlusion, causing even more pain and swelling.

-If host defenses are compromised (e.g., during minor illnesses such as influenza or an upper respiratory infection or because of

immune-compromising drugs), infection can occur. Thus, although the impacted tooth has been present for some time without infection, if the patient experiences even a mild, transient decrease in host defenses, pericoronitis commonly results, even if the patient does not have any immunologic problems.

-Pericoronitis can also arise following minor trauma from a maxillary third molar. The soft tissue that covers the occlusal surface of the partially erupted mandibular third molar (known as the operculum) can be traumatized and become swollen. Often, the maxillary third molar further traumatizes the already swollen operculum, which causes a further increase in swelling that is now traumatized more easily. This spiraling cycle of trauma and swelling is often interrupted only by removal of the maxillary third molar.

-Another common cause of pericoronitis is entrapment of food under the operculum. During eating, food debris may become lodged into the pocket between the operculum and the impacted tooth. Because this pocket cannot be cleaned, bacteria colonize it, which results in pericoronitis.

-Streptococci and a large variety of anaerobic bacteria (the usual bacteria that inhabit the gingival sulcus) cause pericoronitis.

**-Pericoronitis can be treated initially** by mechanically debriding the large periodontal pocket that exists under the operculum by using hydrogen peroxide as an irrigating solution. Hydrogen peroxide not only mechanically removes bacteria with its foaming action, it also reduces the number of anaerobic bacteria by releasing oxygen into the usually anaerobic environment of the pocket. Other

irrigants such as chlorhexidine or iodophors can also reduce the bacterial counts of the pocket. Even saline solutions, if delivered regularly with pressure via a syringe, can reduce bacterial numbers and flush away food Debris.

Pericoronitis can present as a mild infection or as a severe infection that requires hospitalization of the patient. Just as the severity of the infection varies, the treatment and management of this problem vary from mild to aggressive.

- In its **mildest form**,  
pericoronitis is a localized tissue swelling and soreness. For patients with a mild infection, irrigation and curettage by the dentist and home irrigations by the patient usually suffice. If the infection is slightly more severe with a large amount of local soft tissue swelling being traumatized by a maxillary third molar, the dentist should consider immediately extracting the maxillary third molar in addition to local irrigation.

- **For patients who have (in addition to local swelling and pain)**  
mild facial swelling, mild trismus resulting from inflammation extending into the muscles of mastication, or a low-grade fever, the dentist should consider administering an antibiotic along with irrigation delivered under pressure and extraction. The antibiotic of choice is penicillin or, in the case of penicillin allergy, clindamycin.

- **Pericoronitis can lead to serious fascial space infections.** Because

the infection begins in the posterior mouth, it can spread rapidly into the fascial spaces of the mandibular ramus and the lateral neck. If a patient has trismus (with an inability to open the mouth more than 20 mm), a temperature of greater than 101.2°F, facial swelling, pain, and malaise, the patient should be referred to an oral-maxillofacial surgeon, who is likely to admit the patient to the hospital for parenteral antibiotic administration and careful monitoring.

*More bleeding and slower healing also occur when a tooth is removed in the presence of pericoronitis.*

- Prevention of pericoronitis can be achieved by removing the impacted third molars before they penetrate the oral mucosa and are visible. Although excision of surrounding soft tissue, or operculectomy, has been advocated as a method for preventing pericoronitis without removal of the impacted tooth, it is painful and is usually ineffective. The soft tissue excess tends to recur because it drapes over the impacted tooth and causes regrowth of the operculum. The gingival pocket on the distal aspect also remains deep after operculectomy.

The overwhelming majority of cases of pericoronitis can be prevented only by extraction of the tooth.