**Acute Gingival Infections**

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The treatment of acute gingival diseases entails the alleviation of the acute symptoms and elimination of periodontal disease.

**Acute Gingival Diseases:**

1- Necrotizing ulcerative gingivitis (NUG)

2-Acute herpetic gingivostomatitis

3-Periocoronitis.

**Necrotizing ulcerative gingivitis (NUG)**

Necrotizing ulcerative gingivitis (NUG) is a microbial disease of the gingiva that most often occurs in an impaired host. It manifests with the characteristic clinical signs of necrosis and sloughing of the gingival tissues and may be accompanied by systemic symptoms. NUG has historically been identified as an acute disease. However, the term acute in this case is used as a clinical descriptor and not a diagnosis because chronic forms of the disease do not exist. When periodontal attachment loss and bone loss occurs, the condition is called necrotizing ulcerative periodontitis (NUP).

**History of NUG:**

NUG is characterized by a sudden onset of symptoms, sometimes occurring after an episode of debilitating disease or acute respiratory tract infection. A change in living habits, protracted work without adequate rest, poor nutrition, tobacco use, and psychological stress are common features of the patient’s history.

**Etiology of NUG**

**Role of Bacteria**

Plaut in 1894 and Vincent in 1896 postulated that NUG was caused by specific bacteria: **fusiform bacilli and spirochetal organisms**.

**Oral Signs of NUG:**

* Characteristic lesions are punched-out, craterlike depressions at the crest of the interdental papillae, subsequently extending to the marginal gingiva and rarely to the attached gingiva and oral mucosa.
* The surface of the gingival craters is covered by a gray, pseudomembranous slough, demarcated from the remainder of the gingival mucosa by a pronounced linear erythema.
* Spontaneous gingival hemorrhage or pronounced bleeding after the slightest stimulation are additional characteristic clinical signs.
* Other signs often found are fetid odor and increased salivation.

The characteristic lesions may progressively destroy the gingiva and underlying periodontal tissues, but NUG or NUP does not usually lead to periodontal pocket formation because the necrotic changes involve the junctional epithelium and a viable junctional epithelium is needed for pocket deepening so causing gingival recession rather than pocket formation, however, NUG can occur in otherwise disease-free mouths or can be superimposed on chronic gingivitis or periodontal pockets.

**Oral Symptoms of NUG**

* The lesions are extremely sensitive to touch.
* Patient often complains of a constant radiating, gnawing pain that is intensified by eating spicy or hot foods and chewing.
* There is a metallic foul taste.
* The patient is conscious of an excessive amount of pasty saliva.

**Extraoral and Systemic Signs and Symptoms**

* Patients are usually ambulatory and have a minimum of systemic symptoms.
* Local lymphadenopathy and a slight elevation in temperature are common features of the mild and moderate stages of the disease.
* In severe cases, there may be high fever, increased pulse rate, leukocytosis, loss of appetite, and general lassitude.

**Treatment of NUG:**

**First Visit**

* At the first visit, the clinician should obtain a general impression of the patient's background, including information regarding recent illness, living conditions, dietary background, type of employment, hours of rest, and mental stress.
* The patient's general appearance should be observed, as well as apparent nutritional status and responsiveness or lassitude, and his or her temperature should be taken.
* The submaxillary and submental areas should be palpated to detect enlarged lymph glands.
* Treatment during this initial visit is confined to the acutely involved areas, which are isolated with cotton rolls and dried. A topical anesthesia is applied, and after 2 or 3 minutes the areas are gently swabbed with a cotton pellet to remove the pseudomembrane and nonattached surface debris. Each cotton pellet is used in a small area and is then discarded; sweeping motions over large areas with a single pellet are not recommended.
* After the area is cleansed with warm water, the superficial calculus is removed. Ultrasonic scalers are very useful for this purpose, since they do not elicit pain, and the water jet aids in the lavage of the area.
* Subgingival scaling and curettage are contraindicated at this time because of the possibility of extending the infection to deeper tissues, and also of causing a bacteremia.

Unless an emergency exists, procedures such as extractions or periodontal surgery are postponed until the patient has been symptom free for a period of 4 weeks, to minimize the likelihood of exacerbating the acute symptoms.

* The patient is also told to rinse the mouth every 2 hours with a glassful of an equal mixture of warm water and 3% hydrogen peroxide. Twice-daily rinses with 0.12% chlorhexidine are also very effective. Pursue usual activities, but avoid excessive physical exertion or prolonged exposure to the sun as required in golf, tennis, swimming, or sunbathing. Avoid tobacco, alcohol, and condiments. Confine tooth brushing to the removal of surface debris with a bland dentifrice; overzealous brushing and the use of dental floss or interdental cleaners will be painful.
* Patients with moderate or severe NUG and local lymphadenopathy or other systemic symptoms are placed on an antibiotic regimen of penicillin, 500 mg orally every 6 hours.

-For penicillin-sensitive patients, other antibiotics, such as erythromycin (500 mg every 6 hours) are prescribed. Metronidazole (500 mg twice times daily for 7 days), is also effective. Antibiotics are continued until the systemic complications or the local lymphadenopathy have subsided. When used, systemic antibiotics also reduce the oral bacterial flora and alleviate the oral symptoms, but they are only an adjunct to the complete local treatment

* Patients are told to report back to the clinician in 1 to 2 days. The patient should be advised of the extent of total treatment the condition requires and warned that treatment is not complete when pain stops.

He or she should be informed of the presence of chronic gingival or periodontal disease, which must be eliminated to prevent recurrence of the acute symptoms.

**Second Visit**

* At the second visit, 1 to 2 days later, the patient's condition is usually improved; the pain is diminished or no longer present.

The gingival margins of the involved areas are erythematous, but without a superficial pseudomembrane.

* Scaling is performed if sensitivity permits. Shrinkage of the gingiva may expose previously covered calculus, which is gently removed.
* The instructions to the patient are the same as those given previously.

**Third Visit**.

* At the next visit, 1 to 2 days after the second, the patient should be essentially symptoms free. There may still be some erythema in the involved areas, and the gingiva may be slightly painful on tactile stimulation
* Scaling and root planing are repeated.
* The patient is instructed in plaque control procedures which are essential for the success of the treatment and the maintenance of periodontal health. The hydrogen peroxide rinses are discontinued, but chlorhexidine rinses can be maintained for two or three weeks.

**Subsequent Visits**.

Unfortunately, treatment is often stopped at this time because the acute condition has subsided, but this is when comprehensive treatment of the patient's chronic periodontal problem should start.

* In subsequent visits, the tooth surfaces in the involved areas are scaled and smoothed, and plaque control by the patient is checked and corrected if necessary.
* Appointments are scheduled for the treatment of chronic gingivitis, periodontal pockets, and pericoronal flaps, as well as for the elimination of all forms of local irritation.

Patients without gingival disease other than the treated acute involvement are dismissed for 1 week. If the condition is satisfactory at that time, the patient is dismissed for 1 month, at which time the schedule for subsequent recall visits is determined according to the patient's needs.

"It is during our darkest moments that we must focus to see the light."

-Aristotle