

Treatment of Periodontal Emergencies

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Periodontal Emergencies Case Scenarios



- **Case 1:** 26 year old Caucasian Female
- C/C Painful gums
- Had Dental appointment about 5-6 days ago
- No other significant med Hx..



- **Case 2:** 45 year old Hispanic Male
- Noticed bump several months ago,
- Keeps going down and coming back up
- Has recurred again about 3 days ago
- Tender to Touch.
- “ C/C: Want to do something about it”
- Type II Diabetic - think am well controlled.

Learning Objectives.

1. Identify conditions leading to periodontal emergencies,
2. Provide differential diagnoses for acute lesions, and
3. Propose treatment and follow-up protocols for acute periodontal conditions and abscesses.

Periodontal emergencies

- Pain
- Bumps
- Lumps
- Ulcers
- Bleeding gums
- Loose teeth
- Foul breath
- Fever and gum eruptions

Gingival Enlargements

Criteria of location and distribution: gingival enlargement

- *Localized*: Limited to the gingiva adjacent to a single tooth or group of teeth
- *Generalized*: Involving the gingiva throughout the mouth
- *Marginal*: Confined to the marginal gingiva
- *Papillary*: Confined to the interdental papilla
- *Diffuse*: Involving the marginal and attached gingivae and papillae
- *Discrete*: An isolated sessile or a pedunculated, tumor like enlargement

The degree of gingival enlargement can be scored as follows:

- ☐ ***Grade 0: No signs of gingival enlargement***
- ☐ ***Grade I: Enlargement confined to interdental papilla***
- ☐ ***Grade II: Enlargement involves papilla and marginal gingiva***
- ☐ ***Grade III: Enlargement covers three quarters or more of the crown***

Gingival Enlargements

Inflammatory
enlargement

Drug-induced enlargement

Enlargements
associated with
systemic
diseases or
conditions

Neoplastic
enlargement
(gingival tumors)

False
enlarge-
ments

Chronic

Acute

General
inflamma-
tion

Anticonv-
ulsants

Immunos-
uppressa-
nts

Calcium
channel
blockers

Condition-
ed
enlargem-
ent

Systemic
diseases
that
cause
gingival
enlargem-
ent

Benign
tumors

Malignan-
t tumors

Inflammatory enlargement

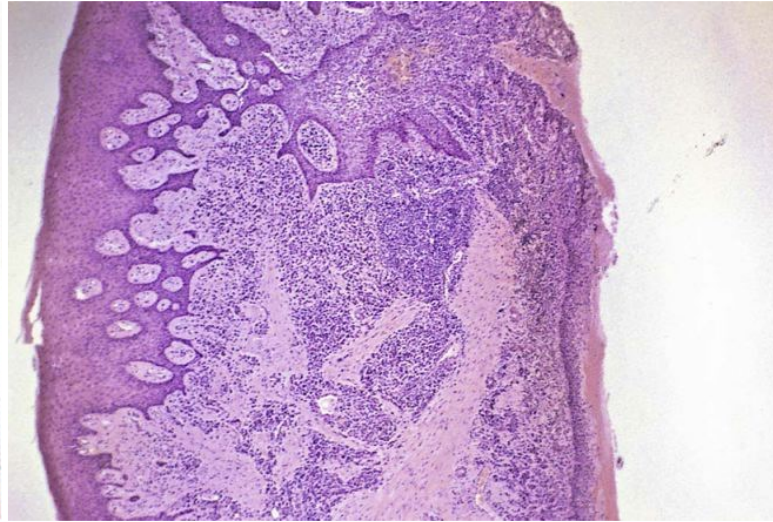
Chronic

Acute

Chronic inflammatory gingival enlargement



Chronic inflammatory gingival enlargement localized to the anterior region.



inflamed connective tissue core and strands of proliferating epithelium.

- *preponderance of inflammatory cells and fluid*
- *with vascular engorgement*
- *new capillary formation, and associated degenerative changes.*

- originates as slight ballooning of interdental papilla and marginal gingiva. Early stages, a life-preserver shaped bulge around involved teeth. Bulge can increase in size until it covers part of the crowns.
- enlargement may be localized or generalized;
- progresses slowly and painlessly, unless complicated by acute infection or trauma
- Occasionally, occurs as a discrete sessile or pedunculated mass resembling tumor.
- may be interproximal or on marginal or attached gingiva.
- Usually painless slow-growing masses -may undergo a spontaneous reduction in size followed by exacerbation and continued enlargement.
- Painful ulceration sometimes in the fold between the mass and the adjacent gingiva.

Gingival Changes Associated with Mouth Breathing.



Gingival enlargement in a mouth breather. Note the lesion that is sharply circumscribed to the anterior marginal and papillary areas.

- The gingiva appears red and edematous, with a diffuse surface shininess of the exposed area.
- The maxillary anterior region is the common site of such involvement.
- In many cases, the altered gingiva is clearly demarcated from the adjacent unexposed normal gingiva
- The exact manner in which mouth breathing affects gingival changes has not been demonstrated.
- Its harmful effect is generally attributed to irritation from surface dehydration.
- However, comparable changes could not be produced by air drying the gingiva of experimental animals

Inflammatory enlargement

Chronic

Acute

Acute Gingival Abscess



Gingival abscess on the facial gingival surface in the space between the cuspid and the lateral incisor, unrelated to the gingival sulcus area.

- localized, painful, rapidly expanding lesion with sudden onset.
- generally limited to the marginal gingiva or the interdental papilla.
- early stages, red swelling with a smooth, shiny surface.
- Within 24 to 48 hours, becomes fluctuant and pointed, with a surface orifice from which a purulent exudate may be expressed.
- adjacent teeth are often sensitive to percussion.
- If permitted to progress, the lesion generally ruptures spontaneously
- Etiology: Foreign object forcefully embedded into gingiva along with bacteria (E.g., Lobster shell fragment, apple core, tooth brush bristle).
- **The lesion is confined to the gingiva and should not be confused with periodontal or lateral abscesses.**

Gingival Enlargements

Drug-induced enlargement

General inflammation

Anticonvulsants
(Phenytoin)

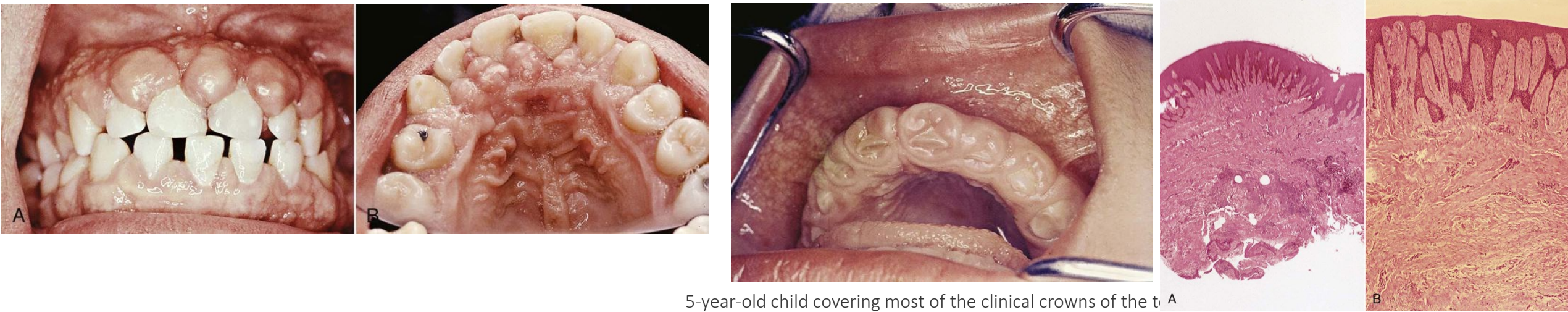
Immunosuppressants
(Cyclosporine)

Calcium channel blockers
(Nifedipine).

DIGO's General features

- Starts as a **painless, beadlike enlargement** of the interdental papilla that then extends to the facial and lingual gingival margins
- As condition progresses, marginal and papillary enlargements unite, into a massive tissue fold that covers a considerable portion of the crowns; interfering with occlusion
- lesion is **mulberry shaped, firm, pale pink, and resilient, with a minutely lobulated surface and** no tendency to bleed.
- **Secondary inflammation can add red or bluish red discoloration** and lobulation and increase tendency to bleed.
- *Drug-induced enlargement may occur in mouths with little or no plaque, and it may be absent in mouths with abundant deposits.*
- Generalized throughout the mouth,
 - more severe in the maxillary and mandibular anterior regions.
 - occurs in areas in which teeth are present (not in edentulous spaces)
 - enlargement disappears in areas from which teeth have been extracted.
- **Even if it is surgically removed, it recurs.** Spontaneous disappearance occurs within a few months after the discontinuation of the drug.
- **DIGO Histopathology:** pronounced hyperplasia of the connective tissue and epithelium; Epithelial acanthosis elongated rete pegs extend deep into the connective tissue; connective tissues - densely arranged collagen bundles with an increase in the number of fibroblasts and new blood vessels, and possible abundance of amorphous ground substance

Anticonvulsants – Phenytoin/Dilantin

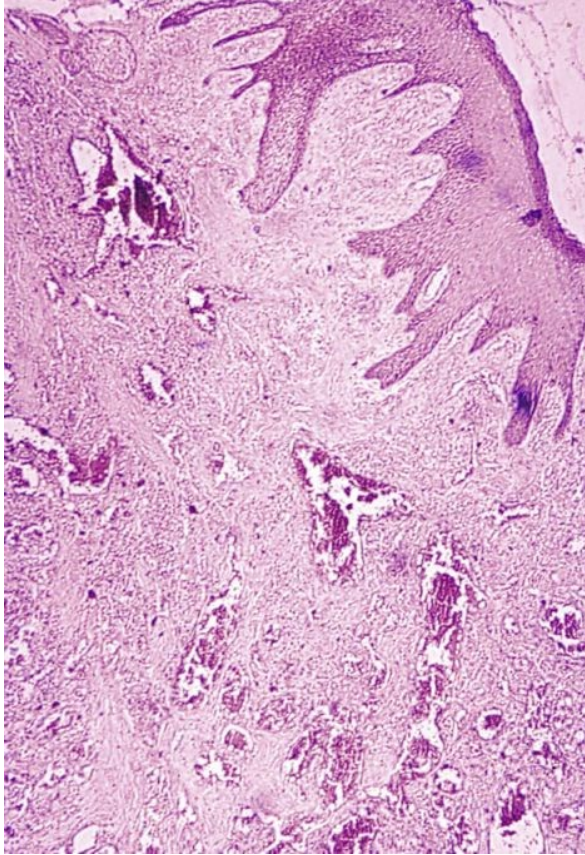


- Other hydantoins - ethotoin (Peganone) and mephenytoin (Mesantoin).
- Other anticonvulsants same side effect are succinimides : (ethosuximide [Zarontin], methsuximide [Celontin]) and valproic acid (Depakene)
- about 50% of patients receiving the drug; reported incidences vary from 3% to 84.5%. It occurs more often in younger patients

Calcium Channel Blockers

- Nifedipine, induces gingival enlargement in 20% of patients.
- Diltiazem, felodipine, nitrendipine, and verapamil also induce gingival enlargement.
- The dihydropyridine derivative isradipine can replace nifedipine in some cases; it does not induce gingival overgrowth

Cyclosporine.



- microscopic finding of many plasma cells plus the presence of an abundant amorphous extracellular substance has suggested that the enlargement is a hypersensitivity response to the cyclosporine
- epithelial hyperplasia and fibrous stroma with abundant vascularization.

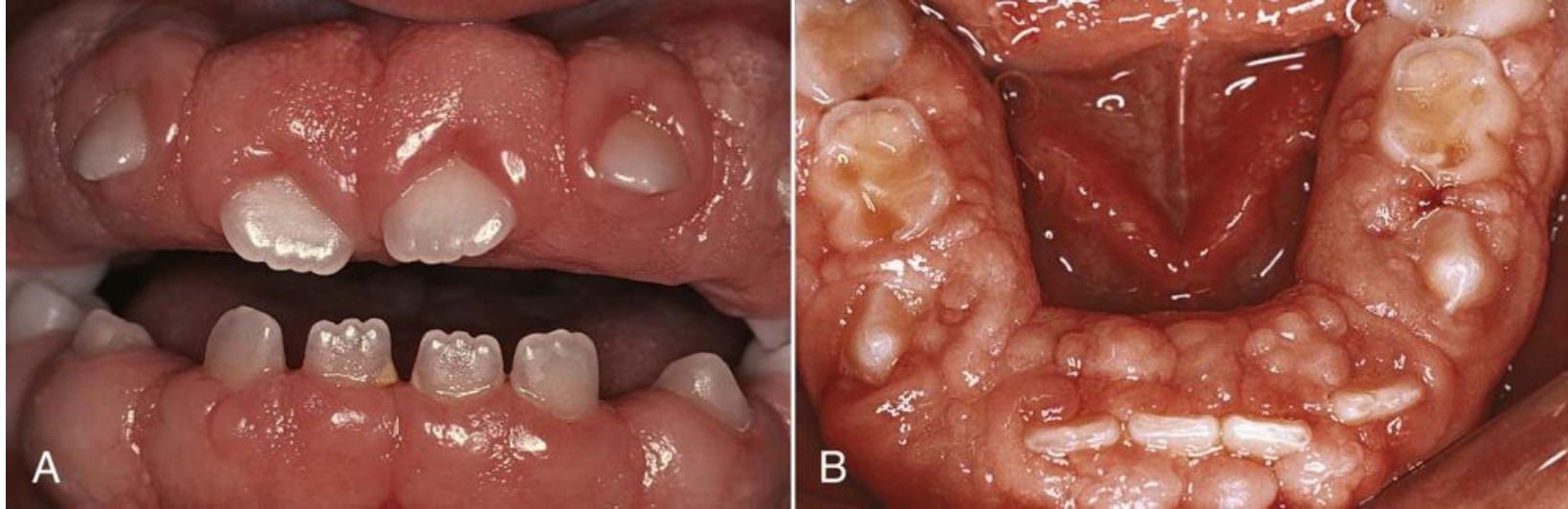


A, Mild involvement located particularly on the papillae between teeth #9 and #10 and teeth #10 and #11. B, Advanced generalized enlargement.

- Cyclosporine-induced gingival enlargement is more vascularized than phenytoin enlargement
- Its occurrence varies, according to different studies, from 25% to 70%.
- It affects children more frequently,
- its magnitude appears to be related more to the plasma concentration than to the patient's periodontal status.
- Gingival enlargement is greater in patients who are medicated with both cyclosporine and calcium channel blockers.

Idiopathic Gingival Enlargement

- *gingivostomatosis, elephantiasis, idiopathic fibromatosis, hereditary gingival hyperplasia, and congenital familial fibromatosis.*



Idiopathic gingival enlargement in 14-year-old white male patient. A, Facial view. The gingiva is firm, with a nodular, pebbled surface and partially covering the crowns of the teeth. B, Occlusal view of the lower jaw

- Enlargement affects the attached gingiva as well as the gingival margin and the interdental papillae.
- in contrast with phenytoin-induced overgrowth, which is often limited to the gingival margin and the interdental papillae
- Facial& lingual surfaces of the mandible /maxilla are generally affected, but the involvement may be limited to either jaw.
- The enlarged gingiva is pink, firm, and almost leathery in consistency, and it has a characteristic minutely pebbled surface
- In severe cases, the teeth are almost completely covered, and the enlargement projects into the oral vestibule
- . The jaws appear distorted as a result of the bulbous enlargement of the gingiva.
- Secondary inflammatory changes are common at the gingival margin.

Conditioned enlargement

Systemic diseases
that cause gingival
enlargement

Pregnancy

Puberty

Vitamin C
deficiency

Plasma cell
gingivitis

Nonspecific
conditioned
enlargement
(pyogenic
granuloma)

Leukemia

Granulomato
us diseases
(e.g.,
Wegener's
granulomatosi
s, sarcoidosis)

Pregnancy enlargement



Localized gingival enlargement in a 27-year-old pregnant patient.

Marginal gingival enlargement

- results from aggravation of previous inflammation,
- incidence has been reported as 10% to 70%
- Varied Clinical Picture.
 - usually generalized,
 - tends to be more prominent interproximally than on facial/lingual surfaces
 - bright red or magenta, soft, and friable,
 - has a smooth, shiny surface.
 - Bleeding occurs spontaneously or on slight provocation.

- may be marginal and generalized,
- may occur as a single mass or multiple tumor like masses
- increase in progesterone and estrogen, to 10 and 30 times the levels present during the menstrual cycle, induce changes in vascular permeability
- leads to gingival edema and an increased inflammatory response to dental plaque.
- The subgingival microbiota - increase in *Prevotella intermedia*.

Tumor like enlargements

- discrete, mushroom like, flattened spherical mass that protrudes from gingival margin/inter-proximal space, and attached by a sessile or pedunculated base
- tends to expand laterally, and pressure from the tongue and the cheek perpetuates its flattened appearance
- dusky red or magenta; smooth, glistening surface often with numerous deep-red, pinpoint markings; superficial lesion usually does not invade bone.
- Semi-firm, but , it may have varying degrees of softness and friability. It is usually painless unless it becomes ulcerated
- Treatment: removal of plaque/ irritants and removal of tissue.

Puberty enlargement



Conditioned gingival enlargement during puberty in a 13-year-old boy.

- both male and female adolescents,
- appears in areas of plaque accumulation
- not painful
- Size of the gingival enlargement greatly exceeds that usually seen in association with comparable local factors.
- It is marginal and interdental, and it is characterized by prominent bulbous interproximal papillae
- Often, only the facial gingivae are enlarged, and the lingual surfaces are relatively unaltered; the mechanical action of the tongue and the excursion of food prevent a heavy accumulation of local irritants on the lingual surface.
- After puberty, the enlargement undergoes spontaneous reduction, but does not disappear completely until the plaque and calculus are removed.

Vitamin C deficiency enlargement (scurvy)

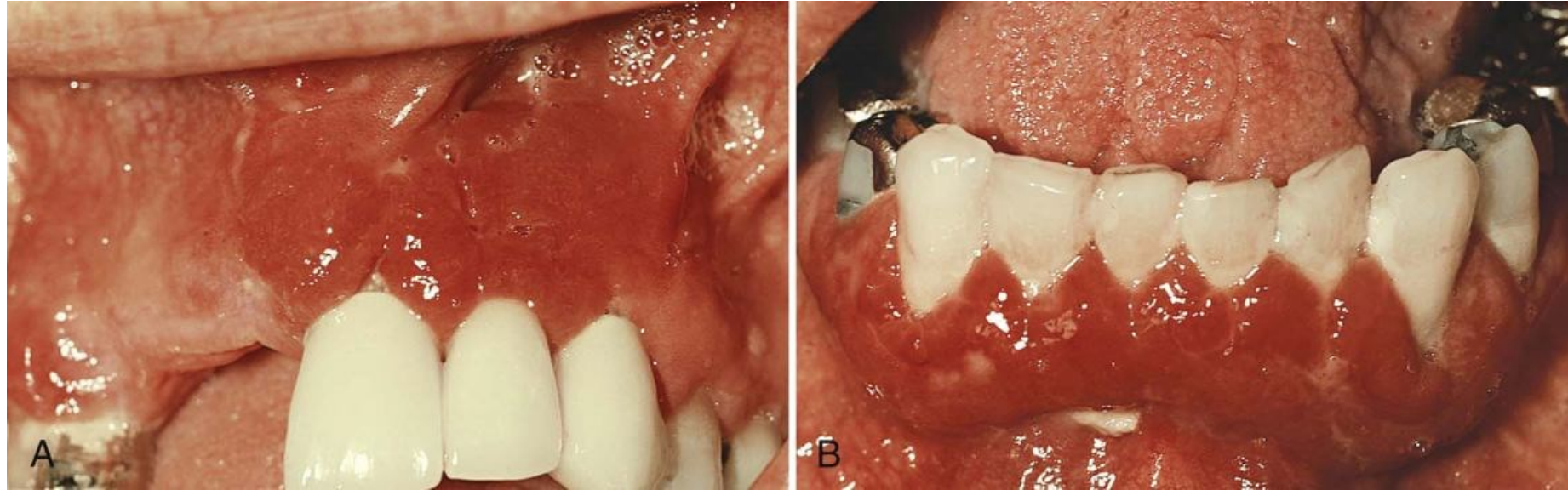
Vitamin C deficiency enlargement



Gingival enlargement in a patient with vitamin C deficiency. Note the prominent hemorrhagic areas.

- Acute deficiency does not cause gingival inflammation, but does cause
 - **hemorrhage,**
 - collagen degeneration, and
 - edema of the gingival connective tissue
- extent of the inflammation is exaggerated
- Marginal enlargement;
- gingiva is bluish red, soft, and friable, with smooth, shiny surface.
- Hemorrhage is spontaneous or on slight provocation;
- surface necrosis with pseudomembrane formation

Plasma cell Gingivitis



A, Diffuse lesions on the facial surface of the anterior maxilla. B, Mandibular lesions

- Mild marginal gingival enlargement that extends to the attached gingiva.
- Gingiva appears red, friable, and sometimes granular, and it bleeds easily;
- usually it does not induce a loss of attachment
- lesion on oral aspect of the attached gingiva and differs from plaque-induced gingivitis.
- associated cheilitis and glossitis
- allergic in origin and possibly related to components of chewing gum, dentifrices, or various diet components
- cessation of exposure to the allergen brings resolution of the lesion

Pyogenic Granuloma



Pyogenic granuloma.

- *Pyogenic granuloma* is a tumor like gingival enlargement that is considered an exaggerated conditioned response to minor trauma
- Pyogenic granuloma is similar in clinical and microscopic appearance to the conditioned gingival enlargement seen during pregnancy.
- Treatment consists of the removal of the lesions plus the elimination of irritating local factors. The recurrence rate is about 15%.

Systemic Diseases that Cause Gingival Enlargement - Leukemia



Leukemic gingival enlargement (acute myelocytic leukemia).

- Leukemic gingival enlargement may be diffuse or marginal and localized or generalized
- may appear as diffuse enlargement of the gingival mucosa, an oversized extension of the marginal gingiva (or a discrete tumor like interproximal mass).
- generally bluish red, with shiny surface.
- moderately firm consistency but tendency toward friability and hemorrhage that occur either spontaneously or with slight irritation.
- Acute painful necrotizing ulcerative inflammatory involvement may occur in the crevice formed at the junction of the enlarged gingiva and the contiguous tooth surfaces.

Wegener's Granulomatosis.

- Rare disease characterized by acute granulomatous necrotizing lesions of the respiratory tract, including nasal and oral defects.
- Renal lesions develop, and acute necrotizing vasculitis affects the blood vessels.
- Initial manifestations of Wegener's granulomatosis may involve the orofacial region and include
 - oral mucosal ulceration,
 - gingival enlargement,
 - abnormal tooth mobility,
 - exfoliation of teeth, and delayed healing response.
- Granulomatous papillary enlargement is reddish purple and bleeds easily on stimulation
- Cause is unknown, but the condition is considered an immunologically mediated tissue injury.
- At one time, the usual outcome for patients with this condition was death from kidney failure within a few months,
- More recently the use of immunosuppressive drugs has produced prolonged remissions in more than 90% of patients.



The classic “strawberry gums” appearance of the mandibular gingiva is seen in this patient. A slight resemblance with desquamative gingivitis is also evident.

Gingival Enlargements

Neoplastic enlargement (gingival tumors)

Benign tumors

Malignant tumors



Papilloma of the gingiva in a 26-year-old man.



Gingival giant cell granuloma.



Leukoplakia of the gingiva.

Other benign tumors are rare or infrequent findings in the gingiva. Include:

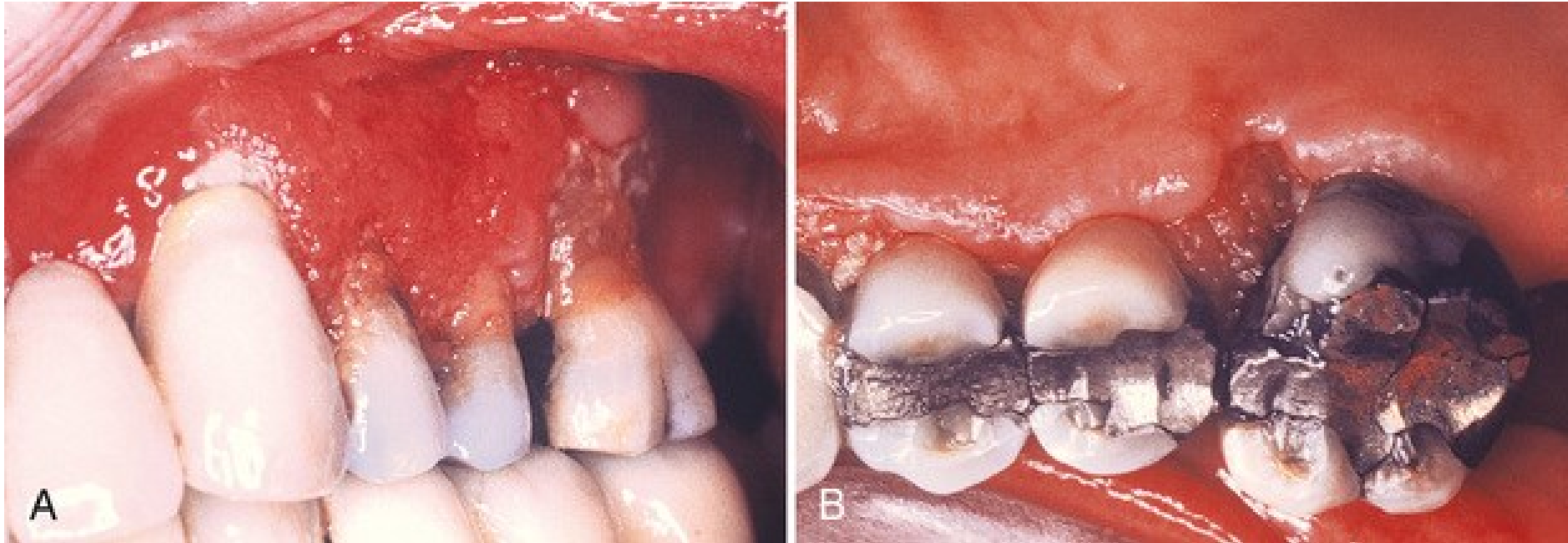
- Gingival Cysts (often microscopic, usually lingual of mandibular canine/premolar areas)
- nevus,
- myoblastoma,
- hemangioma,
- neurilemoma,
- neurofibroma,
- mucus-secreting cysts (mucoceles),
- ameloblastoma.

Gingival Enlargements

Neoplastic enlargement (gingival tumors)

Benign tumors

Malignant tumors

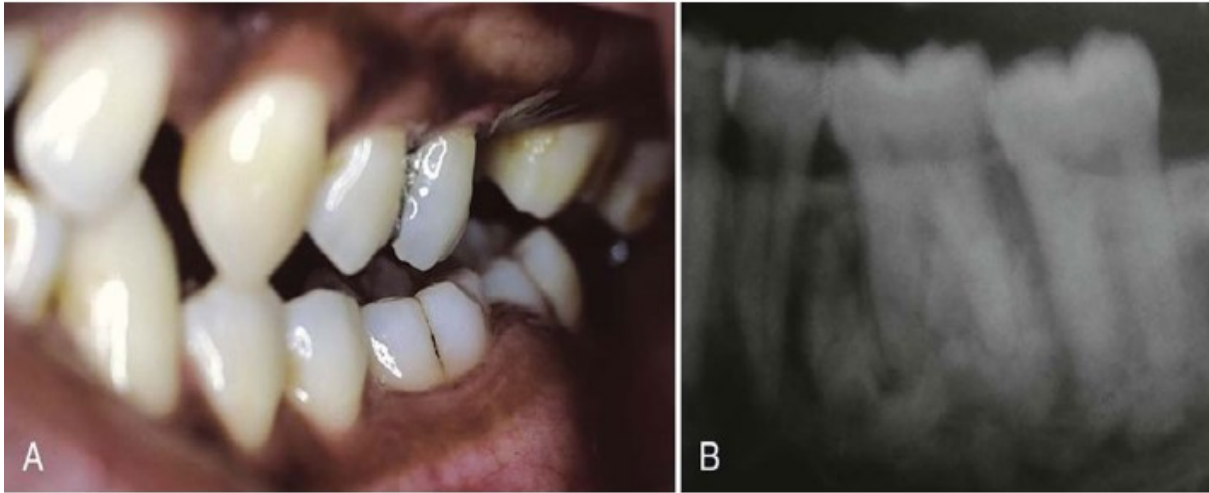


Squamous cell carcinoma of the gingiva. A, Facial view. Note the extensive verrucous involvement. B, Palatal view. Note the mulberry-like tissue emerging between the second premolar and the first molar.

Gingival Enlargements

False enlargements

Underlying Osseous Lesions



Apparent gingival enlargement associated with bone augmentation in a patient with fibrous dysplasia. B, Radiograph of the case shown in A depicting a ground-glass, mottled pattern.

Underlying Dental Tissues



Developmental gingival enlargement. The normal bulbous contour of the gingiva around the incompletely erupted anterior teeth is accentuated by chronic inflammation

- gingiva can be enlarged due to increases in the size of the underlying osseous and dental tissues – False enlargements
 - E.g., tori and exostoses, Paget disease, fibrous dysplasia, cherubism, central giant cell granuloma, ameloblastoma, osteoma, and osteosarcoma.

Acute Gingival Diseases

Acute Gingival & Periodontal Infections

- Necrotizing Ulcerative Gingivitis
- Necrotizing Ulcerative Periodontitis
- Acute Herpetic Gingivostomatitis
- Pericoronitis

Necrotizing Ulcerative Gingivitis (NUG)

- Opportunistic Infection
- Organisms invade tissue
- Very painful
- Found in patients with poor oral hygiene, stress, smoking, lack of sleep etc
- HIV+
- Spirochetes, Fusiform bacteria, P. intermedia



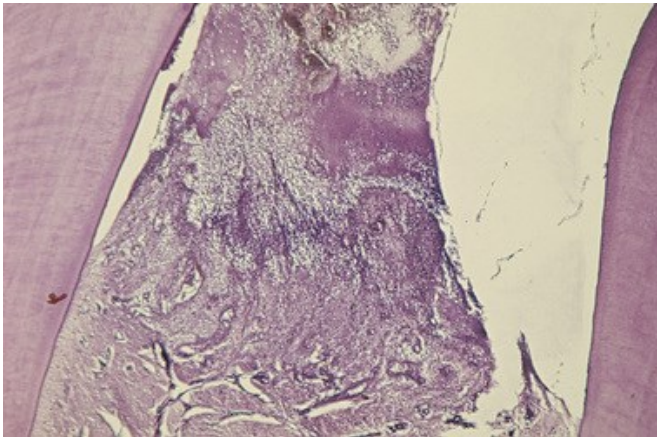
Necrotizing ulcerative gingivitis (NUG)

Primary diagnostic features:

1. gingival necrosis (“punched-out papillae”)
2. gingival bleeding
3. pain

Secondary diagnostic features:

1. fetid breath
2. pseudomembrane formation



In a survey section of interdent papilla in a patient with necrotizing ulcerative gingivitis, the necrotic tissue forms the gray marginal pseudomembrane (top). Ulceration and the accumulation of leukocytes and fibrin replace normal epithelium (bottom).



Necrotizing ulcerative gingivitis. (A) Typical punched-out papilla between the mandibular canine and lateral incisor is covered by a grayish white pseudomembrane. (B) More advanced case shows the destruction of the papillae, which results in an irregular marginal contour. (C) Typical lesions with spontaneous hemorrhage. (D) Generalized involvement of the papillae and the marginal gingiva with whitish necrotic lesions.

Necrotizing ulcerative gingivitis (NUG): Etiology

Associated with:

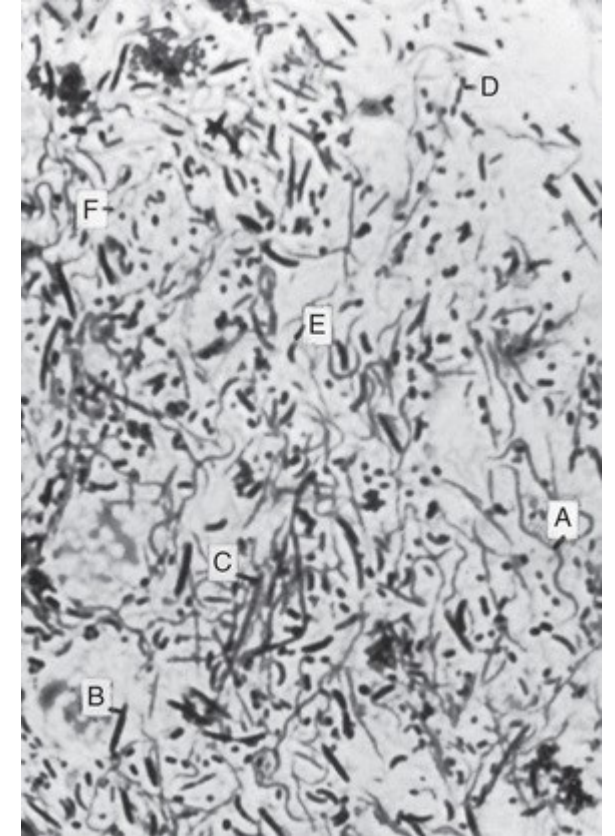
- fusiform bacteria, *Prevotella intermedia*, & spirochetes

Predisposing factors:

- emotional stress, poor diet, cigarette smoking, & HIV infection

Treatment

- alleviate acute inflammation by ↓ microbial load + remove necrotic tissue
- Treatment - chronic disease underlying acute involvement, or elsewhere in oral cavity
- alleviate fever and malaise
- correct contributing systemic conditions



A bacterial smear was obtained from a lesion in a patient with necrotizing ulcerative gingivitis. A, Spirochete. B, *Bacillus fusiformis*. C, Filamentous organism (i.e., *Actinomyces* or *Leptotrichia*). D, *Streptococcus*. E, *Vibrio*. F, *Treponema microdentium*.

Necrotizing ulcerative gingivitis (NUG)

Sequence of Treatment: 1st appointment



<http://www.jcda.ca/article/d46>



<https://www.perio-implants.gr/en/portfolio-item/anup/>



Malek R, Gharibi A, Khlil N, Kissa J. Necrotizing ulcerative gingivitis. Contemp Clin Dent 2017;8:496-500

- 1) Chief complaint; complete evaluation of patient, comprehensive med History, recent illness, living conditions, dietary background, hours of rest, stress, risk factors (HIV?), depression
- 2) History of disease: Pt questioned about history of acute disease, onset & duration:
 - Is the disease recurrent?;
 - Are recurrences associated with specific factors (menstruation, foods, exhaustion, mental stress); has there been any previous treatment?,
 - when? For how long?

Necrotizing ulcerative gingivitis (NUG)

Sequence of Treatment: 1st appointment

4) Patient exam:

- includes general appearance, halitosis?, skin lesions, vital signs (temps), lymphadenitis (submax, submental nodes)

5) Oral cavity exam:

- for classic lesions of NUG, distribution, extension to oropharynx?

6) alleviate acute inflammation:

- by ↓ microbial load + remove necrotic tissue; enough to start repair & regeneration of normal tissues

7) probing NUG lesions may be painful – defer; Treatment acutely involved areas only:

- isolate with cotton rolls, apply topical anesthetic, gentle swab with moist cotton pellets –
- remove pseudomembrane & nonattached surface debris, bleeding may be profuse, throw away each cotton pellet, clean area with warm water,
- then remove superficial calculus (use ultrasonic scaler – minimal pain? – water jet & cavitation help) – use high volume suction close to ultrasonic

Necrotizing ulcerative gingivitis (NUG)

Sequence of Treatment: 1st appointment

8. Subgingival scaling/root planing contraindicated at this time – may move infection to deeper tissues → bacteremia
9. Patients with moderate or severe NUG + local lymphadenopathy or other systemic signs or symptoms
 - place on Amoxicillin 500mg X 40 tablets, one tab q6h X 10 days;
 - for amoxicillin sensitive pts: Erythromycin 500 mg, one tab q6h X 7 days; Metronidazole 500 mg X 14 tabs, one tab bid X 7 days;
 - systemic complications should subside in 1 – 3 days.
10. no exodontia or periodontal Surgery until 4 weeks post acute signs & symptoms of NUG; if emergency Surgery cover with antibiotics
11. Patient report back to clinician in 1 – 2 days

Necrotizing ulcerative gingivitis (NUG)

Sequence of Treatment: 1st appointment

Discharge Instructions

Patient is discharged with following instructions

- no tobacco, alcohol, condiments
- 3% H₂O₂ + warm H₂O q2hrs &/or 0.12% chlorhexidine bid
- get adequate rest; usual activities, avoid excessive exertion,
- no prolonged exposure to sun
- gentle tooth brushing + chlorhexidine preferred
- analgesic, NSAID, ibuprofen, appropriate for pain relief
- inform pt Tx not complete when pain stops; chronic disease must be Txed

Necrotizing ulcerative gingivitis (NUG)

Sequence of Treatment: 2nd and 3rd appointments

Sequence: 2nd appointment

- 1 – 2 days after 1st visit evaluate patient for improvement of signs & symptoms; patient's condition usually improved; pain ↓ or ∅; gingival margins erythematous with no superficial pseudomembrane
- Scale if necessary prn sensitivity, gingival shrinkage may permit supra-gingival calculus removal; same instructions to patient

Sequence: 3rd appointment

- About 5 days after 2nd appointment, evaluation patient; patient should be essentially symptom free; some erythema may still be present, gingiva may be slightly painful on tactile stimulation; PCI (OHI); patient counseled on nutrition, smoking cessation
- Discontinue H₂O₂, can continue 0.12% CHX 2 – 3 weeks more, repeat SRP if needed; acute issues gone, start patient for chronic issues

Necrotizing ulcerative gingivitis (NUG)

Additional Treatment Considerations

- contouring of gingiva as adjunctive procedure
- systemic antibiotics and topical antimicrobials
- supportive systemic treatment
- nutritional supplements persistent or recurrent cases

Persistent or recurrent cases

- reassessment of differential diagnosis to rule out diseases that resemble NUG (i.e. desquamative gingivitis, etc)
- underlying systemic disease causing immunosuppression (HIV, NUP, risk factors), referral to MD
- inadequate local therapy
- inadequate compliance: poor plaque control, smoking, continued stress, continued malnutrition

Necrotizing ulcerative periodontitis (NUP)

Diagnostic features:

- necrosis of gingival tissues, periodontal ligament, & alveolar bone
- lesions most commonly observed in individuals with systemic conditions, including, but not limited to HIV infection, severe malnutrition, & immunosuppression



Necrotizing ulcerative periodontitis 45 yr old, HIV neg white male patient. (A) Buccal view of the maxillary cuspid–bicuspid area. (B) Palatal view of the same area shown in part A. (C) Buccal view of the mandibular anteriors. Note the deep craters associated with bone loss.

May be different stages of the same entity (NUG = NUP?)

Differential Diagnosis

- Acute Gingivitis and Periocoronitis
- Primary Herpetic Gingivostomatitis
- Aphthous Stomatitis
- Mucous Membrane Pemphigoid
- Infectious Mononucleosis
- Erosive Lichen Planus
- Acute Leukemia
- AIDS
- Agranulocytosis

Acute Herpetic Gingivostomatitis

- Primary Infection of the Oral Cavity
- HSV Type 1
- Most frequently in infants and children <6 years
- Most patients are asymptomatic
- Secondary manifestations may include recurrent herpes labialis, herpes genitalis, ocular herpes and herpes encephalitis

Secondary Manifestations

- After the primary infection, the virus ascends through the sensory and autonomic nerves and persists in neuronal ganglia that innervate the site as latent HSV.
- Secondary manifestations occur due to stimuli such as sunlight, trauma, fever or stress

Acute Herpetic Gingivostomatitis (AGHS)- Clinical Features

- **Oral Signs**
- Diffuse erythematous, shiny involvement of the gingiva and adjacent mucosa
- Edema and gingival bleeding
- Discrete, spherical, gray vesicles which may occur on the gingiva, labial and buccal mucosa, soft palate, pharynx, sublingual mucosa and tongue

Acute Herpetic Gingivostomatitis



Herpetic Gingivostomatitis

- Fiery Red Gingivae



Herpes Simplex Infection

- Irregular, Shallow Ulceration of Gingival Margin



ANUG

- Interaction of host and bacteria
- Necrotizing condition
- Punched out gingival margins;
Pseudomembrane
- Rare in children
- No definite duration
- No immunity or contagion

AHGS

- Specific viral etiology
- Diffuse erythema & vesicular eruptions;
that rupture & leave ulcers;
- Diffuse involvement of gingiva and oral
mucosa
- Frequently in children
- 7-10 days duration
- Immunity & Contagion

Primary Herpetic Gingivostomatitis



Primary herpetic gingivostomatitis in a 12-year-old boy, who has diffuse erythematous involvement of the gingiva and a spherical, gray vesicle in the lip.



Involvement of the lip (A), gingiva (B), and tongue (C) in primary herpetic gingivostomatitis



Abnormal herpetic lesions in individuals with human immunodeficiency virus. (A) The lip crusting of primary herpetic gingivostomatitis. (B) Ulcerations of the gingiva, the alveolar mucosa, and the vestibule in the same patient. (C) Severe herpes labialis in the commissures of the lip. (D) A close-up view of herpes labialis. Note the fluid-filled vesicles.

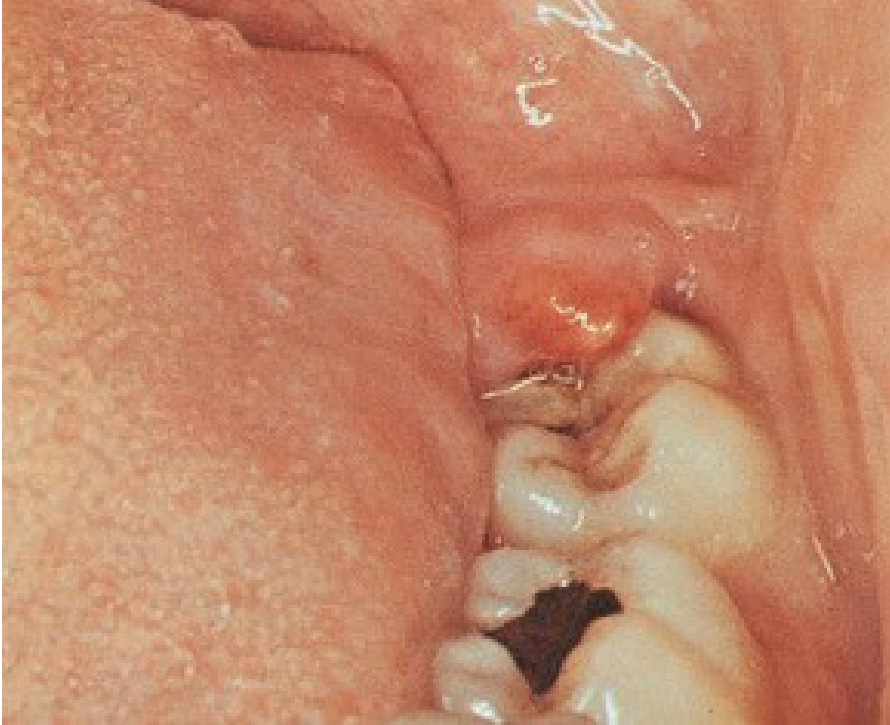
Treatment of Acute Herpetic Gingivostomatitis

- 7 – 10 day course, usually heals without scarring;
- recurrence can be precipitated by previous history of herpes by dental appointment, respiratory infections, sunlight exposure, fever, trauma, chemical exposures, stress.
- Treatment consists of early diagnosis and immediate initiation of antiviral therapy;
- until recently treatment consisted of palliative care; standard of care has changed.
- Amir (1997): Acyclovir ↓ symptoms,
 - i. including fever, from 3 → 1 day;
 - ii. ↓ new extraoral lesions 5.5 days → 0 days;
 - iii. ↓ difficulty with eating 7 → 4 days;
 - iv. viral shedding stopped at 1 day for acyclovir pts vs 5 days for control group; oral lesions present 4 days for acyclovir group vs 10 days for control group
- Acyclovir 15 mg/kg X 5 times per day for 7 days if PHG is Diagnosed \leq 3 days of onset
- > 3 days in immunocompetent patient acyclovir may have limited value

Treatment of Acute Herpetic Gingivostomatitis (AHG, PHG)

- > 3 days after disease onset may receive palliative care,
- NSAIDs to ↓ fever & pain;
- nutritional supplements, topical anesthetics may be indicated;
- postpone perio Treatment until no acute symptoms;
- local or systemic antibiotics maybe in immunocompromised pts
- if condition does not resolve in 2 weeks refer to MD for medical consultation.
- condition is contagious at certain stages when vesicles are present
- herpetic whitlow = herpetic infection of a clinician's finger

Acute Pericoronitis



Pericoronitis. An inflamed coronal flap covers the disto-occlusal surface of the impacted mandibular third molar. Note the swelling and redness.

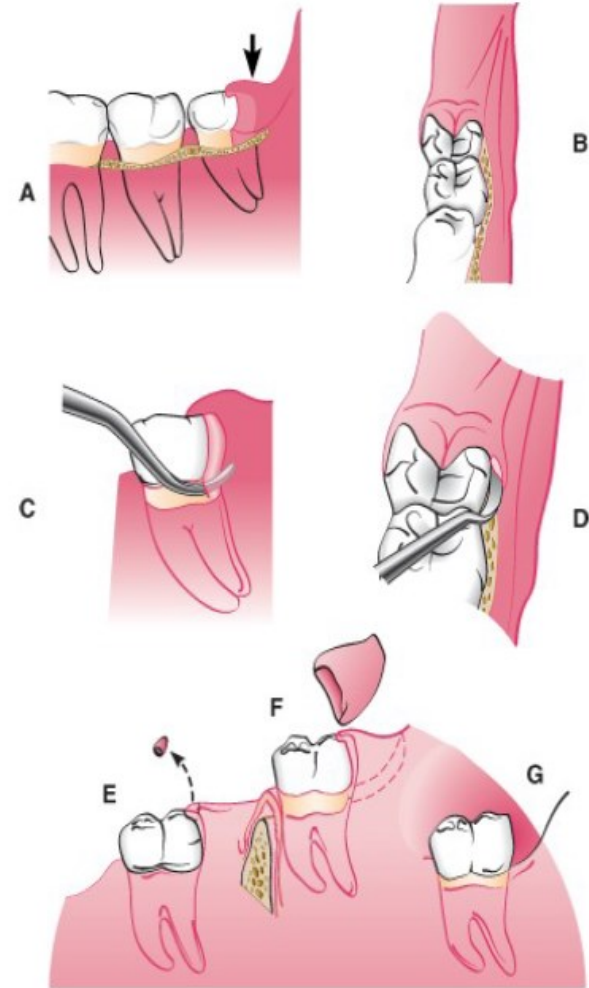
- inflammation of the excess flap of soft tissue that overlies the crown of an incompletely erupted tooth
- Treatment depends on several factors, including
 - position and quality of the surrounding tissues,
 - severity of the inflammation,
 - presence and/or risk of systemic complications, and
 - advisability of retaining the involved tooth.

Acute Pericoronitis: Initial Treatment:

- gently flushing the area with warm water to remove debris and exudate
- swab with antiseptic after the pericoronal flap has been lifted gently away from the tooth with an instrument.
- The underlying debris is removed, and the area is flushed with warm water.
- The occlusion is evaluated to determine whether an opposing tooth is contacting the pericoronal flap.
- It may be necessary to reduce soft tissue surgically and/or adjust the opposing tooth as a palliative measure to alleviate pain.
- Antibiotics can be prescribed in severe cases and for patients who have clinical evidence of diffuse microbial infiltration of the tissue.
- If the pericoronal flap is swollen and fluctuant, an incision and drainage procedure may be indicated to establish drainage and relieve pressure.
- Once the acute symptoms have subsided, the prognosis of the tooth can be evaluated. The decision is governed by the likelihood that the tooth will continue erupting into a functional position or that impaction and the factors predisposing to pericoronitis will persist.
- Once acute symptoms subside: Depending on prognosis: remove flap or remove tooth.

Treatment of Acute Pericoronitis

- A. Inflamed pericoronal flap + 3rd molar
- B. Anterior view 3rd molar + flap
- C. Lateral view + scaler removing debris
- D. Anterior view scaler in position
- E. Incorrect removal of tip of flap
- F. Removal of gingiva distal to 3rd molar after acute symptoms subside
- G. Appearance healed area



Abscesses

Pericoronal

Periodontal Abscess

Gingival

Abscesses of the Periodontium

Classification primarily based on location of the infection : a localized purulent infection...

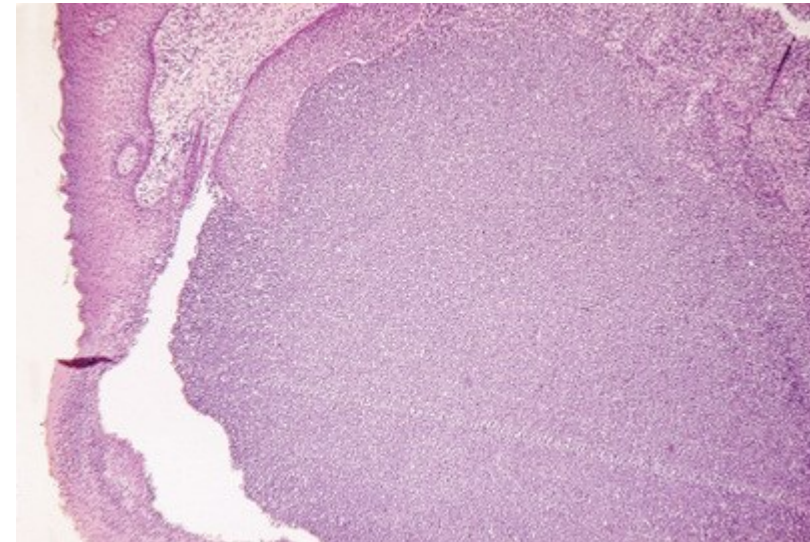
- ▶ (Gingival) that involves the marginal gingiva or interdental papilla
- ▶ (Periodontal) within tissues adjacent to periodontal pocket that may lead to the destruction of periodontal ligament & alveolar bone
- ▶ (Pericoronal) within the tissue surrounding the crown of a partially erupted tooth

Signs & Symptoms of Periodontal Abscess: Acute Abscess

- Mild to severe discomfort
- Localized red, ovoid swelling
- Periodontal pocket
- Mobility
- Tooth elevation in socket
- Tenderness to percussion or biting
- Exudation
- Elevated temperature*
- Regional lymphadenopathy*



Periodontal abscess on an upper right central incisor.



Microscopic view of a periodontal abscess showing the dense accumulation of polymorphonuclear leukocytes covered by squamous epithelium.

Signs & Symptoms of Periodontal Abscess: Chronic Abscess

1. No pain or dull pain
2. Localized inflammatory lesion
3. Slight tooth elevation
4. Intermittent exudation
5. Fistulous tract often associated with deep pocket
6. Usually without systemic involvement

Differential Diagnosis of Periodontal & Pulpal Abscess

Periodontal Abscess

- Associated with preexisting periodontal pocket
- Radiographs show periodontal angular bone loss & furcation radiolucency
- Tests show vital pulp
- Swelling usually includes gingival tissue, with occasional fistula
- Pain usually dull & localized
- Sensitivity to percussion may or may not be present

Pulpal Abscess

- Offending tooth may have large restoration
- May have no periodontal pocket, or if present, probes to a narrow defect
- Tests show non vital pulp
- Swelling often localized to root apex, with fistulous tract
- Pain often severe & difficult to localize
- Sensitivity to percussion

Treatment Options for Periodontal Abscess

Goal: manage the acute phase

- drainage through pocket retraction or incision
- scaling & root planing
- periodontal surgery
- systemic antibiotics
- tooth removal

Indications for Antibiotic Therapy in Patients with Acute Abscess

- Cellulitis (nonlocalized, spreading infection)
- Deep, inaccessible pocket
- Fever
- Regional lymphadenopathy
- Immunocompromised patient

Antibiotic Options for Periodontal Infections

Antibiotic of Choice

Amoxicillin, 500 mg

- 1.0-g loading dose, then 500 mg 3 times/day X 3 days
- Re-evaluation after 3 days to determine need for continued or adjusted antibiotic therapy

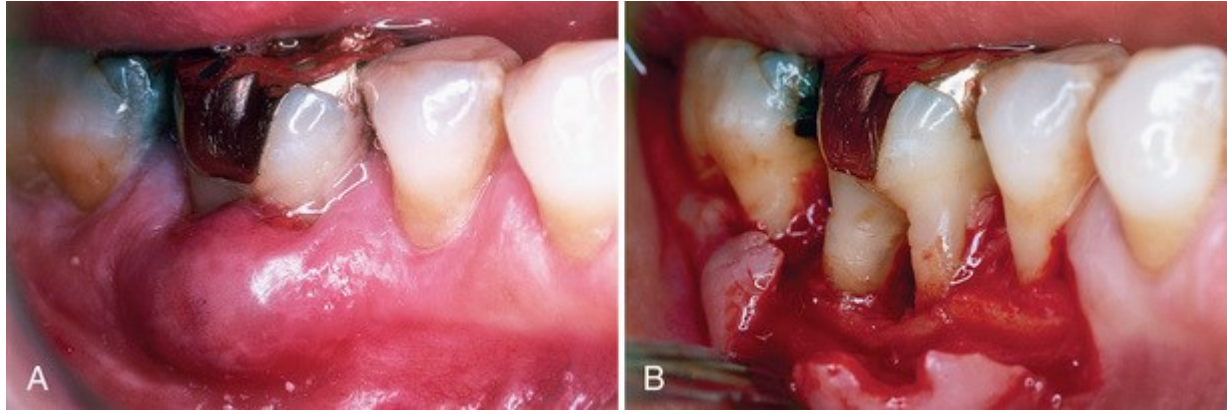
Penicillin Allergy

Clindamycin

- 600-mg loading dose, then 300 mg 4 times/day X 3 days

Azithromycin or clarithromycin)

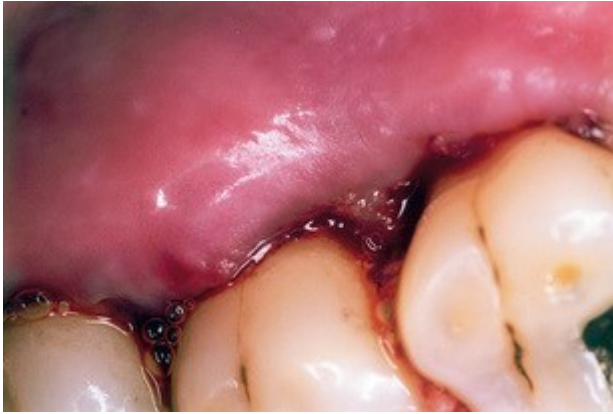
- 1.0-g loading dose, then 500 mg 4 times/day for 3 days



(A) Deep furcation invasions are common locations for the periodontal abscess. (B) Furcation anatomy often prevents the definitive removal of calculus and microbial plaque.



(A) Fistula is observed in attached gingiva of a maxillary right canine. (B) Elevated flap shows the cause to be a root fracture.



Postprophylaxis periodontal abscess resulting from partial healing of a periodontal pocket over residual calculus.



Localized periodontal abscess of a mandibular right canine in a male adult with poorly controlled type 2 diabetes mellitus. For some patients, periodontal abscess formation may be the first sign of the disease.



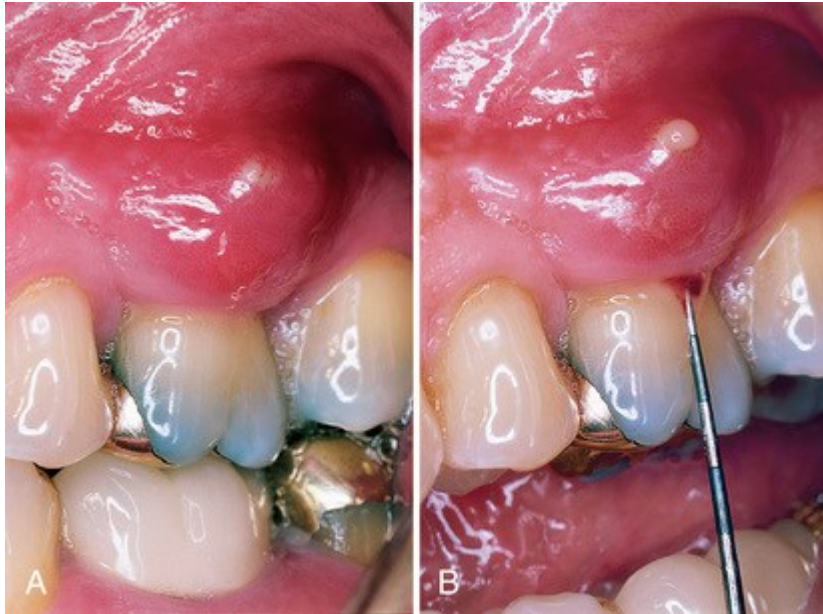
Patient presenting with acute abscess complained of dull pain and a sensation of tooth elevation in the socket. Signs of tissue distention and exudation are evident. Gentle digital pressure may be sufficient to express purulent discharge



Plaque-associated gingival abscess of a mandibular right canine



(A) Maxillary right first molar with fistula on the attached gingiva. (B) With local anesthesia, periodontal probe is introduced through the fistula and angled toward the root end. (C) Surgical flap elevation demonstrates failed endodontic therapy and tooth fracture as causing the fistula.



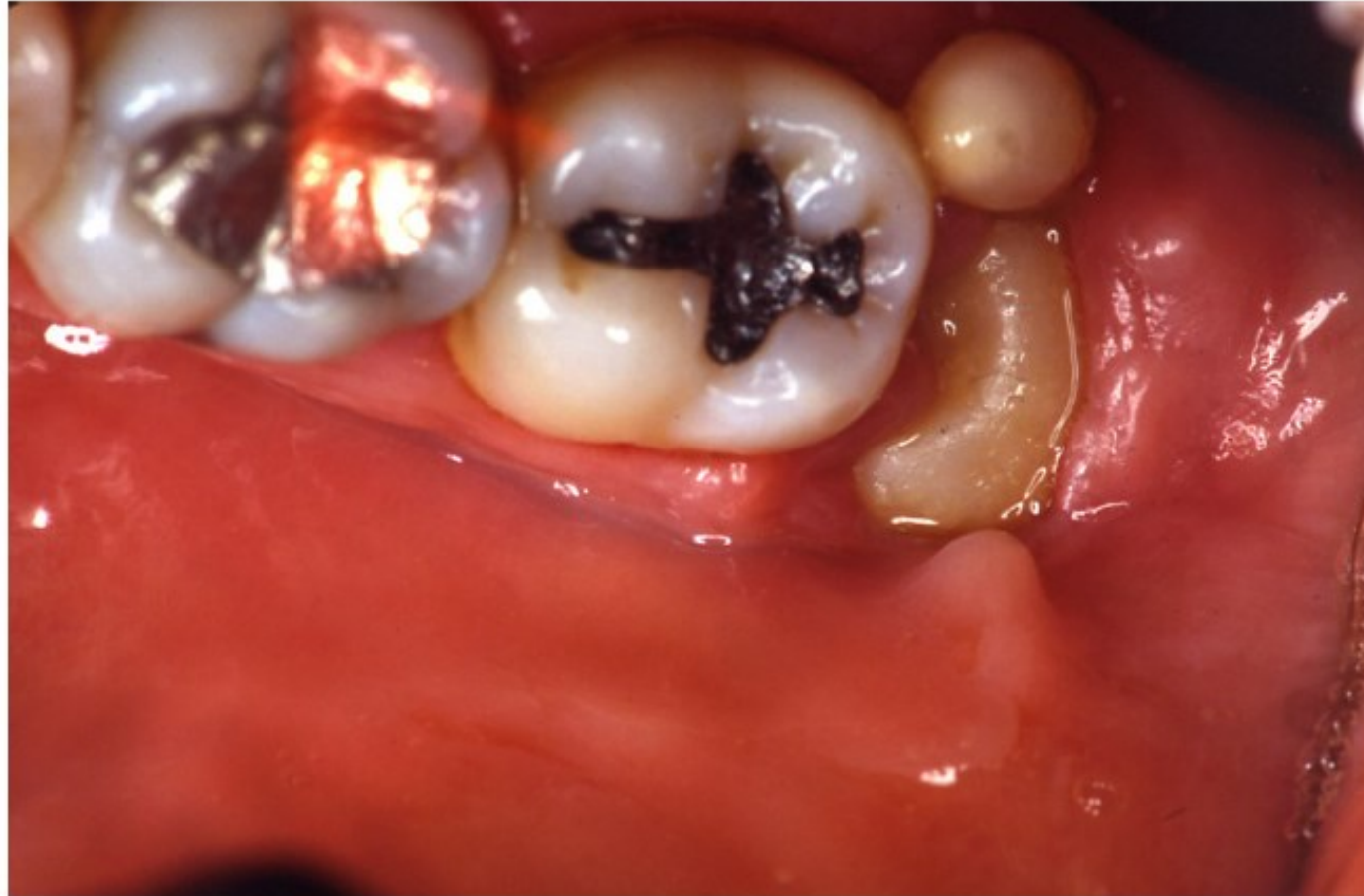
(A) Periodontal abscess of maxillary left first molar. (B) Periodontal probe is used to retract the pocket wall gently

Surgical Treatment of chronic periodontal abscess:

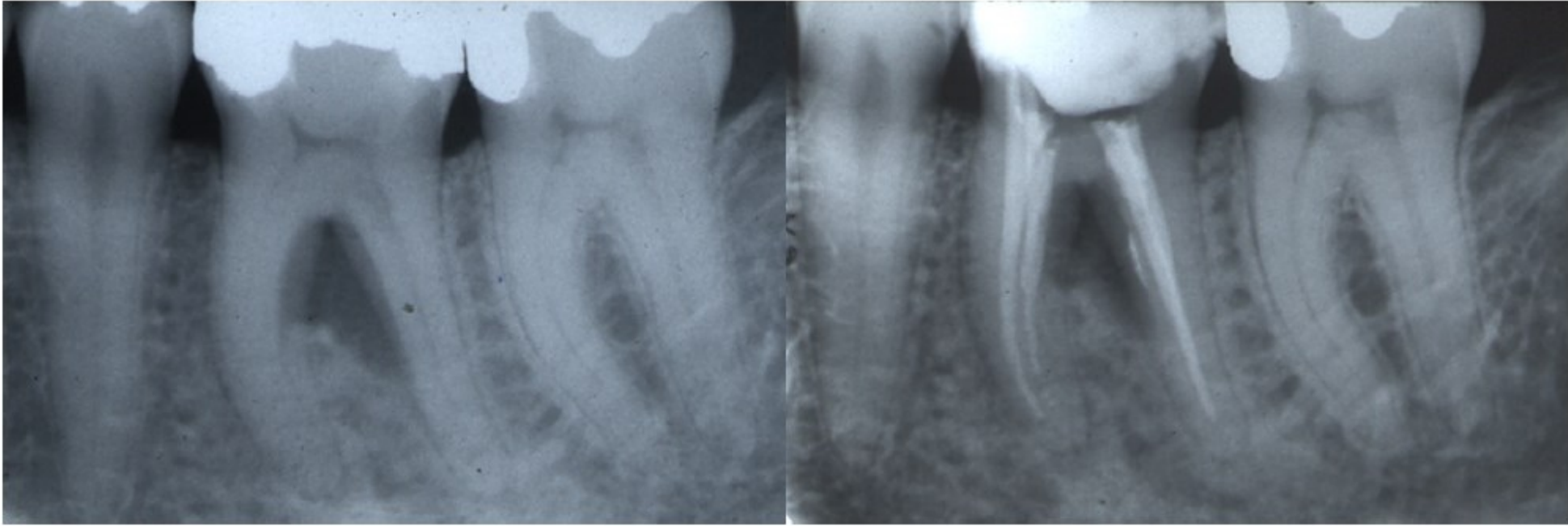
- (D) Chronic periodontal abscess of a maxillary right canine.
- (B) With local anesthesia, periodontal probe is inserted to determine severity of the lesion.
- (C) With mesial and distal vertical incisions, a full-thickness flap is elevated, exposing severe bone dehiscence, a subgingival restoration, and root calculus.
- (A) Root surface has been planed free of calculus, and the restoration has been smoothed.
- (E) Full-thickness flap has been replaced to its original position and sutured with absorbable sutures.
- (F) At 3 months, gingival tissues are pink, firm, and well adapted to the tooth, with minimal periodontal probing depth.



Pericoronitis / periocoronal abscess



Pulpal-Periodontal Lesion



Dr. Donald Newell



Private Practice considerations.

- How much time for emergency treatment in the office?
- What is an emergency?
- Be sensitive to the way you question the patient regarding herpetic issues
- What is your ideal day in the office? - % C&B, operative, pediatric dentistry, endodontics, periodontics or Oral surgery.