Acute Necrotizing Ulcerative Gingivitis

Dept. of Periodontology

Objectives

- To understand, diagnose and treat ANUG

Content

- Introduction
- Patient's History
- Local Predisposing Factors
- Debilitating Systemic Disease
- Oral Signs & Symptoms
- Extraoral Signs & Symptoms
- Staging
- Bacterial Flora
- Treatment

Introduction

- Inflammatory Destructive disease of the gingiva
- Trench Mouth
- Vincent's Infection
- Origin attributed to fusiform bacilli and spirochetes

Patient's History

- Sudden Onset
- May follow an episode of debilitating disease or acute respiratory tract infection
- Change in living habits
- Protracted work without adequate rest
- Psychological stress
- Smokers

Local Predisposing Factors

- Preexisiting gingivitis, Smoking
- 98% of ANUG patients are smokers (Pindborg)
- May be superimposed on preexisting gingivitis and pockets
- Deep pockets, pericoronal flaps particularly vulnerable
- Areas of gingiva traumatized by opposing teeth – palatal surface of maxillary incisors and labial surface of mandibular incisors.

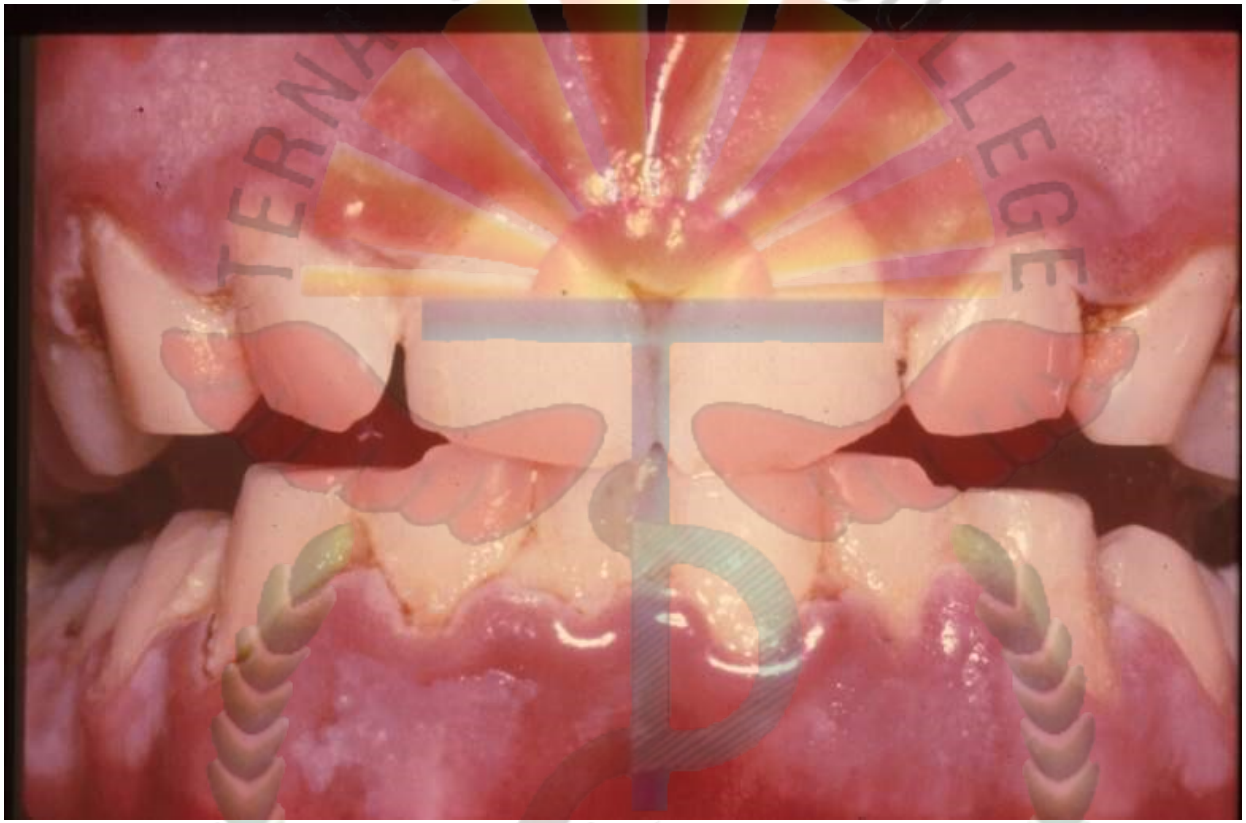
Debilitating Systemic Disease

- Syphilis, Cancer
- Ulcerative Colitis, Blood Dyscrasias
- Leukemia, Anemia
- AIDS
- Nutritional Deficiency
- Psychosomatic Factors - Stress

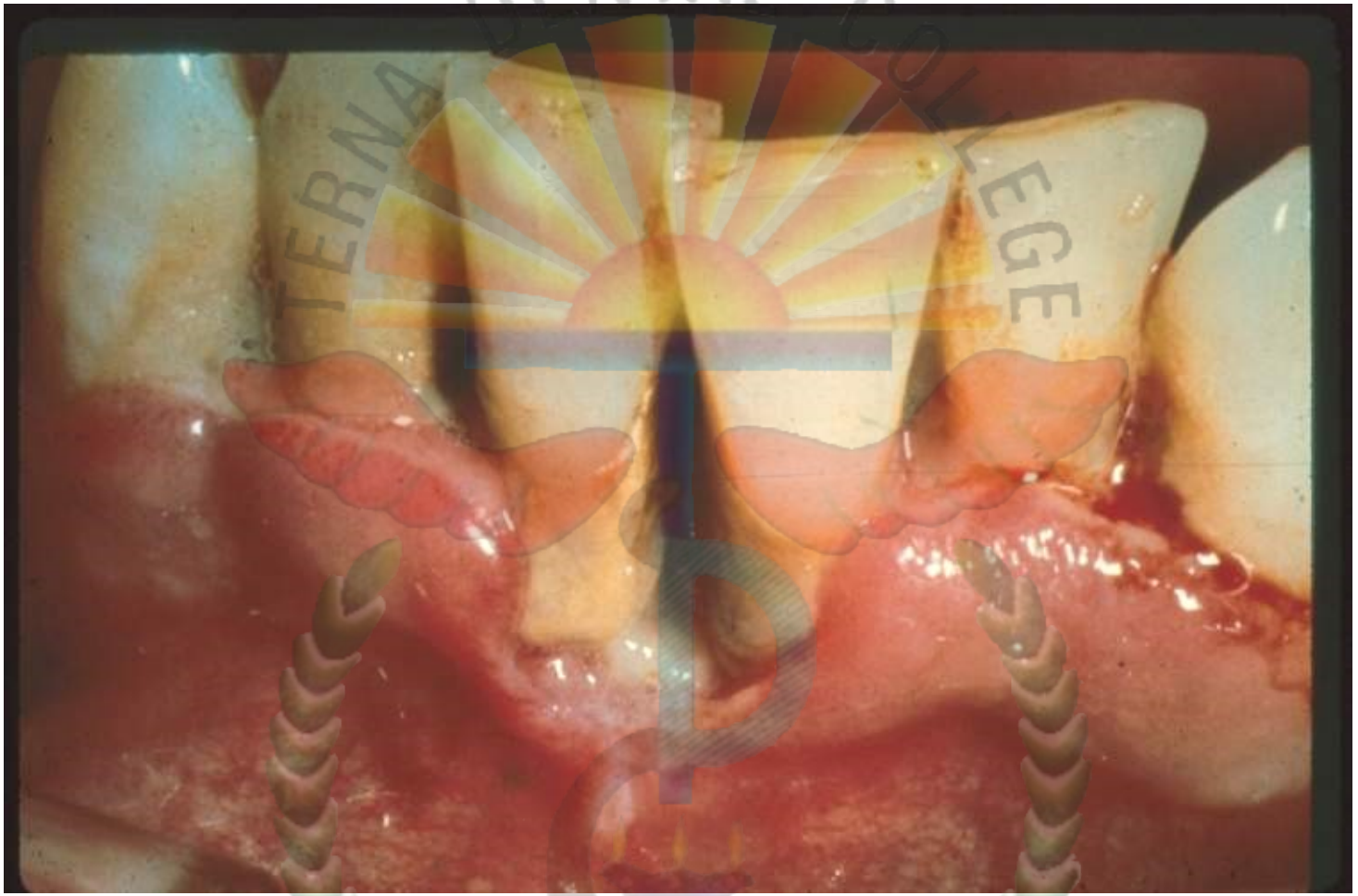
Oral Signs

- Punched out crater like depressions at crest of interdental papilla extending to marginal gingiva
- Surface is covered by gray pseudomembrane slough
- Spontaneous Gingival Haemorrhage
- Pronounced bleeding on slightest stimulation
- Fetid odor
- Increased salivation

Necrotizing Ulcerative Gingivitis



Necrotizing Ulcerative Periodontitis



Oral Signs

- Can occur in otherwise disease free mouths or can be superimposed on chronic gingivitis or pockets.
- Localized/ Generalized
- Rare in edentulous mouths
- NUG may lead to NUP

Oral Symptoms

- Extremely sensitive to touch
- Complain of constant radiating/ gnawing pain
- Intensified by spicy or hot foods & chewing
- Metallic foul taste
- Excessive amount of pasty saliva

Extraoral Signs & Symptoms

- Local lymphadenopathy
- Slight elevation in temperature
- Severe cases – High Fever, Increased pulse rate, Leucocytosis, Loss of appetite

Stages in progress of NUG - Pindborg

- 1) Only the tip of the interdental papilla is affected
- 2) Lesion extends to marginal gingiva and causes punched out papilla
- 3) Attached gingiva is also affected
- 4) Bone is exposed

Cohen – Staging

- Stage 1 – Necrosis of tip of interdental papilla (NUG)
- Stage 2 – Necrosis of entire papilla (NUG/NUP)
- Stage 3 – Necrosis extending to the gingival margin (NUP)
- Stage 4 – Necrosis extending to the attached gingiva (NUP)
- Stage 5 – Necrosis extending into buccal/labial mucosa (NS)
- Stage 6 – Necrosis exposing alveolar bone (NS)
- Stage 7 – Necrosis perforating skin of cheek (Noma)

Four Zones - Listgarten

- Zone 1 – Bacterial Zone – Varied bacteria, few spirochetes – small/medium/large types
- Zone 2 – Neutrophil rich Zone – Numerous Leucocytes – Neutrophils, Bacteria
- Zone 3 – Necrotic Zone – Disintegrated tissue cells, remnants of collagen fibers. Numerous spirochetes
- Zone 4 – Zone of spirochetal infiltration – Medium/Large spirochetes

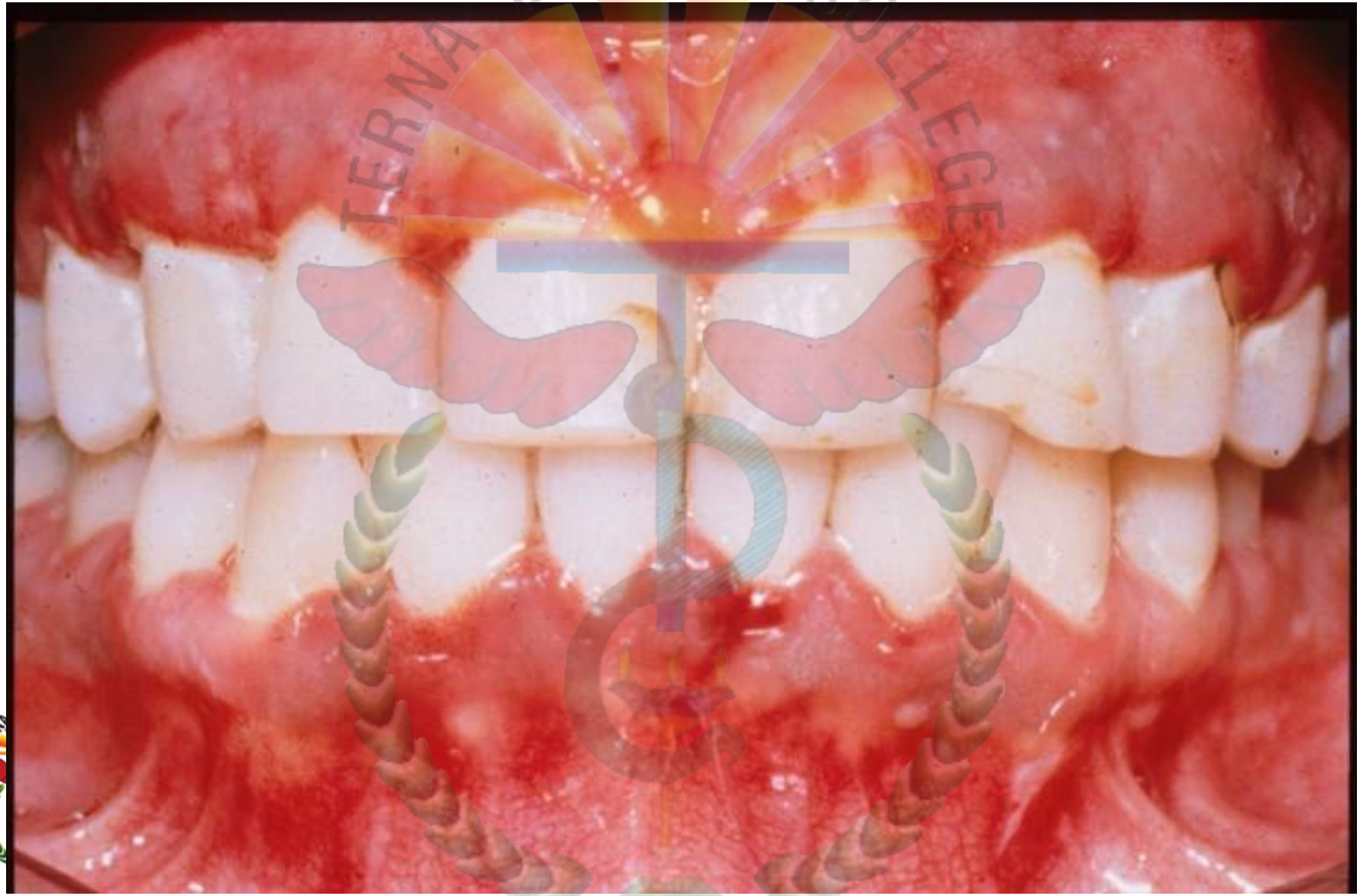
Bacterial Flora

- Scattered bacteria – spirochetes, fusiform bacilli
- Desquamated epithelial cells
- Occasional PMN's
- Spirochetes – Small/Medium/Large
- Prevotella Intermedia, Fusobacteria, Treponema, Selenomonas

Diagnosis

- Clinical Findings – gingival pain, ulceration, bleeding.
- Bacterial culture helpful for differential diagnosis
- Pseudomembrane Slough
- Necrosis of papilla

Primary Herpetic Gingivostomatitis



NUG & PHG

NUG	PHG
Etiology –fusospirochetes	Specific viral etiology
Necrotizing condition	
Punched out craters, pseudo-membrane	Diffuse erythema, vesicular eruption, Vesicles rupture to form ulcers
Uncommon in children	Common in children
No definite duration	Duration of 7 – 10 days
No demonstrated immunity	Acute episode results in some degree of immunity

Treatment

- 1) Alleviation of the acute inflammation plus treatment of chronic disease.
- 2) Alleviation of generalized toxic symptoms such as fever, malaise.
- 3) Correction of systemic conditions that contribute to initiation or progress of the gingival changes.

Treatment

- First Visit –
- Obtain general impression of patients background, info regarding recent illness, living conditions, dietary background, type of employment, hours of rest, mental stress.
- Check for lymphadenopathy
- Check patient's temperature
- Examine oral cavity

Treatmet

- Evaluate oral hygiene
- Determine presence of pericoronal flaps, periodontal pockets, local irritants.
- Previous Dental treatment?, mental stress?, exhaustion?
- Treat acutely inflamed areas first – Topical anesthetic is applied, affected areas are gently swabbed to remove the pseudomembrane.
- Rinse area with warm water.

Treatment

- Superficial calculus is removed with ultrasonic scalers.
- Water jet aids in lavage of the area.
- Subgingival scaling and curettage are contraindicated to eliminate possibility of extending infection in deeper tissues and causing bacteremia.
- Postpone periodontal surgeries and extractions till the acute symptoms are subsided.

Treatment

- Rinse mouth every 2 hours with glassful of equal mixture of warm water and 3% Hydrogen peroxide.
- Twice daily rinses with 0.12% CHX
- Penicillin 250-500 mg. four times a day
- Metronidazole 200-400 mg. 3 times a day for 7 days.
- Patient to report back in 1 or 2 days
- Avoid tobacco, alcohol or condiments.

Treatment

- Second Visit –
- 1 or 2 days later –
- Scaling is performed if sensitivity permits.
- Instructions to be repeated.

Treatment

- Third Visit –
- 1 or 2 days after second visit
- Perform scaling and root planing
- Hydrogen Peroxide rinses are discontinued.
- CHX rinses maintained for 2-3 weeks.

Treatment

- Periodontal surgeries, Flap surgeries, gingivoplasty can be performed in subsequent visits.

CONCLUSION

- ANUG is a rare but debilitating oral condition and has to be diagnosed carefully

Take home message

- ANUG haws to be distinguished from other acute conditions and treated immediately following correct protocol

PROBABLE SAQs &LAQs

- Write about the Signs & Symptoms of ANUG
- Treatment of ANUG
- Write about the causative factors and local and systemic Predisposing Factors