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Case Report

# Acute Gingivitis; Manifestation of Many Underlying Diseases with 2 Case Reports

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#### ABSTRACT:

Routinely we come across chronic gingivitis in most dental patients either localized or generalized. However, less commonly we also come across acute gingivitis in a few dental patients involving either marginal attached and interdental gingiva, so in such cases through case history and appropriate investigations may help clinician to detect the appropriate causative factors. ANUG is one form of acute periodontal disease. It has a sharp fast onset of interdental gingival necrosis is a unique feature of the clinical presentation, halitosis, bleeding and soreness in the gingiva. Systemic signs and symptoms including fever, lymphadenopathy and fatigue may be present. There are a number of risk factors including stress, inadequate nutrition and immune system disorders, particularly HIV infection that appears to play a significant role in the ANUG pathogenesis. However, Erythematous gingiva, desquamation and erosion of the gingival epithelium, and blisters development are the hallmarks of desquamative gingivitis. It is a frequent clinical manifestation of desquamative gingivitis. **Keywords**: Acute Gingivitis, ANUG, Desquamative Gingivitis

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#### **INTRODUCTION**

Gingivitis classified on the basis of clinical appearance (such as ulcerative, hemorrhagic, necrotizing, and purulent) etiologic (such as druginduced, hormonal, nutritional, infectious, and plaqueinduced) and duration (acute and chronic).<sup>1</sup> Acute necrotizing ulcerative gingivitis (ANUG) is a painful gingival infection that can result in fever, occasionally bad breath, and general malaise. Poor oral hygiene is the most frequent cause of acute gingivitis, which results in plaque building up on teeth and causes a rapid, severe, and incapacitating ulceration and inflammation of the interdental gum tissue. Fusobacterium nucleatum subspecies polymorphum is a bacteria connected to ANUG. Despite the low prevalence of this condition, it has a clear clinical significance because it is the most serious pathology associated with the tooth biofilm. Neglected ANUG might result in extremely quick tissue death.<sup>2</sup> When deciding on the appropriate course of treatment for

ANUG, a person's tolerance level and the severity of the condition are both taken into account. This disease is more likely to affect young people who have one or more of the risk factors listed here: poor dental hygiene, mental anguish, physical stress, smoking, and lowered infection resistance. The condition often manifests more severely in underweight kids. An uncommon type of periodontal disease called ANUG/ANUP results in bleeding, pain, and gingival ulceration.<sup>3</sup> The word "desquamation" is derived from the Latin word "desquamare" which means to scrape fish flaking. Desquamation is a medical term that is defined as ''loss of epithelium parts in little and large numbers of mucosa peeling and exfoliation" and also term for persistent gingival desquamation.<sup>4</sup> The phrase "desquamative gingivitis" is really used to describe a particular clinical symptom, not only a single diagnosis. A clinical feature known as desquamative gingivitis is characterized by widespread erythema of the gingival margin and

keratinized gingiva.<sup>4</sup> It proceeds with vesicular development, atrophy, erosion and desquamation. The affected gingival epithelium is extremely brittle and has a propensity to easily peel with even minor damage. In certain instances, large ulcerative regions might be seen. Desquamative gingivitis is a condition that develops after puberty, particularly in people over 30. Women are more likely than men to experience it. Rarely is it reportedly seen in children, according to reports.<sup>4</sup> Acute gingivitis may be ANUG or it may be the idiopathic desquamative gingivitis or may be the sign of immune-compromised condition like HIV. In some haematological cases deficiency like leukopenia. neutropenia. ervthrocytopenia. and malignant diseases like leukemia, multiple myeloma and histiocytosis X may be manifested with acute gingivitis apart from viral and bacterial infections, (for example; herpetic gingivostomatitis and streptococcus gingivitis). Few cases of drug allergies like stomatitis medicamentosa and stomatitis venenata also cause acute gingivitis. In a few cases, erythematous candidiasis, radiation mucositis and few acute viral infections like scarlet fever, vitamin and mineral deficiency like iron deficiency causes anemia can manifest as stomatitis and as a part of it acute gingivitis can occur. Apart from all these, local factors play an important role causes acute gingivitis. However, in broad categories we reported localized or generalized. In many patients it manifests as erythematous gingivitis. However in few lichenoid reactions it can occur in the oral mucosa and at the same time may involve gingiva with erythematous

color change. We can also note that GIT disorders can manifest with acute inflammatory changes on oral mucosa as a part of it, the erythematous changes reported on gingiva also (ex- Crohns and celiac disease). In females during puberty, and menopausal stages due to hormonal changes acute gingivitis may be the manifestation as endocrine disorder (egestrogen and progesterone imbalance).

## **CASE REPORT 1**

A 28 year old male patient reported to the department of Oral Medicine and Radiology of MMDCH, Darbhanga with a chief complaint of gum swelling with pain in the upper anterior teeth region for 5-6 months. No relevant medical history was found.

#### **CLINICAL FINDINGS**

Intraoral clinical examination revealed generalized soft edematous gingiva with generalized bleeding on probing was present. Localized class II gingival recession with grade I mobility was present in lower anterior region. Generalized gingival pockets with 5mm depth were present. Attachment loss was seen in the upper left canine. Generalized extensive accumulation of plaque and calculus was observed with halitosis. On taking a detailed medical history of the patient we got to know that the patient was taking homoeopathic medicine for the condition and later the condition aggravated. On extraoral examination, no gross facial asymmetry was seen. On physical examination, no abnormalities were detected.

**Figure 1: Pretreatment View** 



**Figure 2: Post Treatment View** 



Differential diagnosis was NUP, NUG and Localized Abscess. Final diagnosis was confirmed as Acute Necrotizing Ulcerative Gingivitis (ANUG). In the first visit we continued with phase II therapy like supragingival scaling with curettage and removal of local factors.

Patient was prescribed with the following medicines for 1 week:

- ✤ Amoxicillin 500mg 3 times a day,
- Metronidazole 200mg 3 times a day,
- Combination of Aceclofenac 100mg and paracetamol 500mg and serratiopeptidase 15mg was given twice a day for 3 to 5 days.
- Chlorhexidine mouthwash

After 1 week patient was recalled and reevaluated and was recovering from the condition.

Patient was advised to maintain good oral hygiene and proper brushing technique was advised with soft bristled brush.

#### **CASE REPORT II**

A female patient aged 32 years old reported to the department of oral medicine and radiology of MMDCH, Darbhanga with a chief complaint of swollen gums in the upper and lower front region of the jaw for the last 6 months. Her medical history revealed that she was suffering from hypothyroidism and was under medication (L-Thyroxine- 25 mg) for the last 1 year.

#### **CLINICAL FINDINGS**

Intraoral examination revealed mobility of lower anterior teeth and erythematous gingiva was seen. Extraoral examination did not reveal any gross deformity. Complete blood count and random blood sugar were within normal limits. Oral lichen planus, mucous membrane pemphigoid, desquamative gingivitis were included in differential diagnosis. However, the case was provisionally diagnosed as desquamative gingivitis with idiopathic etiology.

**Figure 3: Pre Treatment View** 



**Figure 4: Post Treatment View** 



Phase II therapy started like scaling and root planning for attachment formation. Medical treatment includes the following medications prescribed for prescribed for a week-

- Metronidazole 400mg 3 times a day
- Combination of Aceclofenac 100mg, paracetamol 500mg and serratiopeptidase 15 mg was given twice a day for 3 to 5 days
- Chlorhexidine mouthwash
- Pantoprazole 40 mg 1 time a day before meal
- Topical triamcinolone 0.1% also has been prescribed 3 times a day for 2 weeks.

Proper tooth brushing technique was given and advised soft bristled brush as if hard bristled brush is used it may cause trauma and hinder the healing process and as a result of it the patient starts to suffer from malnutrition. Nutritional support was given with a rich diet of protein, minerals (zinc tablets) and antioxidants (lycopene). Patient was recalled after 1 week and re-evaluated. Phase III therapy was continued with gingivoplasty. Patient was recalled at a regular interval of once in 30 days for up to 12 months. Patient underwent oral prophylaxis that includes scaling and polishing was done.

## DISCUSSION

Gingivitis may progress into a more severe form if its root cause is left untreated. It is a non destructive type of periodontal disease. It is generally referred to as gum disease.<sup>5</sup> Necrotizing ulcerative gingivitis progression results in tissue loss. Therapy is based on local debridement, scaling and root planning sessions with good plaque control and maintaining a good oral hygiene regimen. Local antimicrobial therapy, using chlorhexidine solutions of 0.1% or 0.2% chlorhexidine is required. In the initial phase of treatment, eliminating or minimizing the acute phase of the disease with the evolution of tissue necrosis.<sup>2</sup> In the second case, the affected patient was a 32 yr old female presented with gum swelling in the upper and lower labial region for the last 6 months. There was widespread erythema with inflammation of maxillary and mandibular anterior labial gingiva. Desquamative gingivitis affecting their marginal and attached gingiva was appreciated with respect to the right and left maxillary region. However if the patient is not responding to the above therapy, then pt can be placed under topical and systemic steroid therapy. Ex 0.1% triamcinolone acetonides and low dose 10-20 mg of methylprednisolone should be given orally with tapering doses before the therapy ends. So, in a few cases we can also give immunosuppressive agents like azathioprine 100-150mg per day and methotrexate 2.5mg 2 to 4 times a week if patients fail to respond with other therapies.

## CONCLUSION

Gingival inflammation is a result of bacterial buildup on and around the teeth. Microbes surrounding the gingival tissues cause inflammation, discoloration and tender to touch.<sup>5</sup> Gingivitis can be treated with good oral prophylaxis and regular dental checkups can prevent gingival diseases and treat them at the right time.<sup>5</sup> Treatment of an acute gingivitis patient solely depends upon the correct diagnosis of condition including taking a detailed history, coupled with a thorough intraoral and extraoral examination. The gingival lesions are usually treated by improved oral hygiene measures and topical corticosteroid therapy and vitamin supplements for 1 month. The lesion showed considerable improvement after steroid application. Regular follow up was done and the lesion showed no signs of recurrence.<sup>6</sup> Desquamative gingivitis with idiopathic microbiological culture and sensitivity studies as well as viral genome detection culture should be done (for e.g. a linear marginal gingivitis found in some of the HIV patients). Higher risk people should visit dental clinics more frequently. People who have had gum diseases should visit their dental professionals at least once a year. When the treatment is over, ask your doctor for the next appointment. Acute gingivitis cases with marginal involvement lands up with no confirmed causes during the process of diagnosis; one should suspect the list of new causes and they should be investigated with further elaborated techniques. (For e.g. bacterial, viral and immunological studies should be suspected in those cases to detect the specific cause). Further needful studies should be conducted to detect the specific cause until that etiology may remain obscure and hence supportive treatment can be done.

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