Proceeding Book

8th International Dental Scientific Meeting
Dentistry Faculty, Hasanuddin University
June 20th – 22nd Grand Clarion Hotel & Convention – Makassar, Indonesia

“Comprehensive Dentistry in the International Community

Editor:
Dr. drg. Susilowati, SU
drg. Maria Tanumihardja, MDSc
PROCEEDING BOOK

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Acute Necrotizing Ulcerative Gingivitis: Management and Therapy

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Abstract

Acute Necrotizing Ulcerative Gingivitis (ANUG) is a specific gingivitis that characterized by presence signs like gingival inflammation and necrotic, also pain, gingival bleeding, unpleasant taste and mouth odor/halitosis. The etiology of the disease is still unknown precisely. Some researchers believe ANUG is the primary disease that caused by Borrelia fusiform bacillus and vincentii. The occurrence ANUG not only caused by microorganisms, but supported also by the presence of predisposing factors, such as oral hygiene, tooth malposition, poor dental restorations, trauma from occlusion, smoking, poor physical condition, malnutrition, and also emotions. Either ANUG happens once or repeatedly it is causing gingival papila breakdown and crater formation on the interdentally papila. With plaque control, scaling - root planing and curettage is done repeatedly, the regeneration of breakdown papila may occur. However, the main failure of treatment ANUG is premature discontinuation of therapy after the acute symptoms subside. Patients need to be informed clearly that the higher the potential risk of recurrence and the importance of follow-up. If the curing is done early and done quickly and accurately, gingival damage can be prevented. Care must be done thoroughly and scheduled to prevent recurrence of the disease.

Keywords: ANUG, etiology, treatment.

INTRODUCTION

Acute Necrotizing Ulcerative Gingivitis (ANUG) is a specific gingivitis, it is characterized by the presence of signs of gingival inflammation and necrosis, accompanied by pain, gingival bleeding, taste and bad breath /
halitosis, and does not transmitted by ANUG kompleks.\textsuperscript{5} The etiologies of such patterns often give an overview of epidemic disease, the group of people who were in close contact, especially in an environment sama.\textsuperscript{12} In a group of people in less developed Countries with lower socioeconomic levels have been reported about the incident of ANUG. From the results of research conducted in India ANUG incidence data obtained 54\% in some patients with age under 10 years old. Studies in children ages 2-6 years in Nigeria with a random manner, the data obtained was 11.3\% ANUG incidents and 23\% in the population of children in the hospital under the age of 10 years old.\textsuperscript{16}

In the United States, it is difficult to determine because of the lack of agreement in terms of the measurement criteria. Many people believe that gingivitis starts from the beginning of the children, and that 9.17\% of children aged 3-7 years suffering from gingivitis. At puberty, the prevalence increases to 70-90\%. In recent years, periodontal disease has been declining slowly in American adults. ANUG may be a clinical problem in immunocompromise patients during chemotherapy. Internationally, various studies have been conducted in Australia, Sweden, UK and Switzerland, in children aged 3-6 years, gingivitis have been found as many as 48-85\% of all cases, but it is difficult to know whether this reflects differences in population real or whether this is due to the use of different criteria in defining the disease. The incidence in adolescents around the world can be compared with data in the United States (70-90\%). ANUG may be found in areas where there are people at high risk, especially in children with poor living conditions. Some cases in areas such as Nigeria, where ANUG and Noma found in children under the age of 14 years old.\textsuperscript{8}

**REVIEW**

**Definition**

Acute Necrotizing Ulcerative Gingivitis (ANUG) with another name Trench Mouth or Vincent’s Disease is a gingivitis specific in the mouth, is characterized by the presence of signs of inflammation and necrosis of gingival, accompanied by pain, gingival bleeding, taste and smell of
the mouth is not tasty/ halitosis, noninfectious also caused by complex etiology.\textsuperscript{5,11}

The pattern of spread of this disease is an infectious. Lesions may extend to the cheeks, lips, tongue palate, pharyngeal region even just contact with the healthy tissues. Ulcerative lesions may develop involving the alveolar process is accompanied sequester teeth and bones, until the process of forming a hole/ triangular space between teeth due to loss tulang.\textsuperscript{10}

Spreading ANUG also presumably through the accumulation of microorganisms from one individual to the other, through certain habits that provide opportunities for ANUG causing microorganisms can migrate to and accumulate both in individuals who have never been exposed to microorganisms that cause ANUG previously or who have ever been. These habits can be use toothbrushes together, eating the same food from the mouth to mouth or using the same utensils. In these circumstances, ANUG may arise as a result of the increase in the number and virulence of the bacteria that cause, or for any predisposing factors besides helping trigger the occurrence of abnormalities, but can also aggravate the disorder existing at above.\textsuperscript{10}

**Etiology**

The etiology of the disease is still not known. Some researchers believe that ANUG is the primary disease caused by *Borrelia fusiform bacillus* and *vincenti*.\textsuperscript{10,14} It could be argued that because symbiosis *Fusospirocheta* consisting of *B. fusiformis* and *B. vincentii* suspected as the main cause of this disease. *Fusiform bacillus* is a weak gram positive, with a diameter of 05-1 microns, 5-14 microns long, seen alone or in a group, do not move and can grow in anaerobic atmosphere. While *Borellia vincentii* are gram- negative, 3-6 spiral shaped, length 10-15 microns, move on, possible to grow in an anaerobic atmosphere even though difficult.

The occurrence ANUG not only caused by microorganisms, but supported also by the presence of predisposing factors as follows:

1. Factors Predisposing Local
   - Poor Oral Hygiene

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Schluger said there is nothing more important in contributing to infection ANUG lower than the standard of oral hygiene.

- Tooth malposition and partial eruption
  Middle tooth eruption (especially the third molars) usually associated with the formation of pockets that provide a good environment for the growth of anaerobic bacteria in the mouth, such as *Fusobacterium* and *Spirochetae*.

- Restoration of teeth that are less good, which interfere with the marginal gingiva and interdental papilla.

- Traumatic Occlusion

- Smoking
  Smoking can decrease the chemotactic and phagocytic function of lymphocytes. It can lower resistance to infection, appear on PMN chemotactic defect. Kardachi and Clarke reviewed the literature concerning the etiology of ANUG. They found that smoking can affect gingival blood circulation and say with confidence that ANUG lesions caused by aseptic necrosis of epitheliumgingiva as an indirect result of inadequate blood flow.¹³

2. Factors Predisposing Systemic

- The physical condition of weak

- Malnutrition
  Predisposing factors such as blood diseases (leukemia, aplastic anemia, neutropenia), AIDS, and emotional exhaustion (stress) may lead to decreased neutrophil function and will eventually aggravate or facilitate the occurrence ANUG.

- Emotions
  Tissue damage is expected due to endotoxin who works directly or indirectly with a trigger immunologic and inflammatory reactions. Lower resistance to infection is ANUG development. For example, in smokers and stress/ anxiety. Anxiety and depression can cause a decrease in circulating antibody that affects the body’s defense mechanisms of the host. As a result of the anxiety can lead to loss of appetite resulting in nutritional deficiencies. Vitamin A deficiency affects the integrity of epithelial cells and connective
tissue cells where it will weaken the body’s barrier against invading microorganisms.

Severity
Based on the severity of the abnormality location, ANUG be distinguished.\textsuperscript{18}

Phase I: Just the tip of the interdental papilla were exposed, showed the bleeding when done probing (Figure 1).

![Figure 1. Damage happened at the tip of the interdental papilla.](image)

Phase II: Necrosis of the interdental papilla and the gingival margin and the presence of ulceration of the oral mucosa.

Phase III: In addition to the attached gingiva and interdental papilla and marginal gingiva may occur coalition of some adjacent areas (Figure 2).

Stage IV: There nekrotisasi conditions below the gingival tissue (gangrenous stomatitis).

Phase V: Necrosis of soft tissue to bone, bone necrosis, bone sequesters possibility alveolar process (NOMA) (Figure 3).

Phase VI: ASlveolar bone necrosis and / or facial tissue destruction.

![Figure 2. Damages already reached attached gingival.](image)
Clinical Manifestations

Clinical symptoms often occur suddenly, with localized or diffuse pain in the gingiva. Patients often feel spontaneous gingival bleeding, hypersalivation, discomfort or iron taste in the mouth and a bad smell. The lesions are often covered pseudomembrane white to gray base and shape the necrotic inflammation consisting of inflammatory cells and microorganisms. Specific lesions such as necrotic ulceration and interdental papilla blunt. Mucosal ulceration can occur on the lips, cheeks and tongue where the tissue in contact with the gingival lesions or because trauma. It can also happen on palate and pharynx region but rarely found. Ulceration can develop into alveolar process with sequestrer teeth and bones. If there is bleeding that stands out, the tooth surface can be brown and the smell of the mouth become more tajam.¹

Lymph nodes are usually slightly enlarged or obvious lymphadenopathy occurs mainly in children anak.² Calculus often collected on an ulcerated papilla shaped like a crater and bleed easily. Lost sense of taste and bad taste when smoked. Noticeably protruding teeth and sesitif to pressure. The increase in temperature occurs in cases of mild to moderate and high fever in the case berat.³

At the ultrastructural level indicated the presence of four layers in the necrotic lesions, namely: superficial zone bacteria, which contain bacteria in a variety of shapes and sizes, including the Spirochetae. Apical part of the first zone is a zone rich in neutrophils and bacteria, including Sporichetae.
The next layer is the necrotic zone with necrotic cells such as bacteria, including the *Spirochetae* and *Fusobacterium*. The most apical zone of the necrotic lesion is intact tissue which invaded Spirochaeta.\(^{10}\)

**Differential Diagnosis**

Based on the symptoms, ANUG can be distinguished from chronic gingivitis. In chronic gingivitis main complaints are the most common gingival bleeding. Patients are usually aware of this when brushing or flossing, and the bleeding can be associated with solid food because it can irritate the gingiva. While in ANUG spontaneous bleeding or bleeding that may be associated with solid food because it can irritate the gingiva. While in ANUG spontaneous bleeding or bleeding with minimal local trauma accompanied local pain, weakness, bad breath and bad taste as the presence of iron in the cavity sense mulut.\(^{16}\)

Clinically, the patient was found pseudomembrane ANUG grayed out under the walls of the crater ulcers and infections can spread to the adjacent soft tissue and induration in the affected area. The main characteristics that distinguish ANUG with chronic gingivitis is the distinctive mouth odor (odor), the discovery of necrotic tissue, and systemic symptoms that accompany the onset of the disease such as fever, malaise and lymphadenopathy.\(^{8}\)

ANUG often difficult to distinguish from primary herpetic gingivostomatitis, which usually occurs in younger age groups. In primary herpetic gingivostomatitis, patients suffering from non-specific symptoms such as cervical lymphadenopathy is usually thorough, malaise and mild fever in the absence of clinical features of typical lesions. In addition, there are multiple ulcerations on the entire surface of a typical cavity mulut.\(^{18}\)

**Treatment**

In the short term, the first act consisted of oral hygiene therapy, including mechanical cleaning and removing debris in the place concerned. Local treatment with metronidazole systemically performed for 3-5 days. There are a response to the administration of systemic antibiotics and local debridement. The symptoms gradually disappear over 3-4 weeks, but often
recurrant. In the long term, hygiene therapy to prevent further damage to gingiva should dilakukan.\textsuperscript{24,15}

The consequences of ANUG that is repeated once or papillary gingival damage and crater formation on the interdental papilla. Some researchers say that ANUG recurrence in the interdental papilla as crater on tersebut.\textsuperscript{6} With curettage and plaque control can be done over the regeneration of damaged papilla. However, the main failure of treatment ANUG is premature discontinuation of therapy after acute symptoms mereda.\textsuperscript{3} When acute symptoms subside, the patient with ANUG will not follow the recommended treatment and subsequent therapy visits. Therefore patients should be informed clearly that the high potential risk of recurrence and the importance of follow-up. If the curing is done early and done quickly and accurately, gingival damage can be prevented. In most cases the formation of the crater caused by the delay in treatment or the occurrence of repeated exacerbations.\textsuperscript{5,9}

Persistence of ANUG recurrence associated with gingival damage, surgical treatment is carried out on the area of damage. Usually done gingivoplasti at 1 month after the acute infection, to obtain adequate plaque control and to reshape and form physiologic gingival contour. However gingivoplasti broad for Improving your gingival form, must sacrifice healthy gingival margin on the buccal or lingual region. The need for consideration of surgery like this, especially the unaesthetic appearance in the anterior region.\textsuperscript{3,6}

But in recent years resurfaced report on the effectiveness of periodontal treatment with non-surgical approach. This treatment includes scaling and root planning, which shows a real advantage in getting esthetic results when compared to treatment with surgical approach, especially in the anterior region. Shapiro filed a therapeutic technique developed by Kramer, is to perform curettage periodically to stimulate the regeneration of the interdental papilla and to reduce or eliminate surgery in ANUG therapy. This therapy technique requires approximately 9 months of active treatment to obtain maximum gingival regeneration and maintenance to a degree of success that is not unexpected. Some of the interdental papilla will regenerate into a convex or flat, while others do not respond at once.\textsuperscript{5,11}
Figure 4. Preoperative treatment. Male, 17 years with ANUG. Inflammation, bleeding, and necrosis of the interdental papilla formed crater. Oral Hygiene bad patient, stress, and alcohol abuse contribute to the cause in this patient.

Figure 5. Same patient, right after debridement on the first visit. Patients were instructed to control plaque, tooth brushing, flossing, rinsing 0:12 % chlorhexidine twice daily.

Figure 6. Same patient, after 4 months. Gingival health improved and seemed to mark the beginning of the regeneration of the interdental papilla. In the area in doing scaling and root planing and plaque control performed again.
Management of ANUG
Consists of several phases:
1. Local: reduction in acute inflammatory
2. Systemic
   - Supportive care: reduction general symptoms such as fever and lethargy
   - Care etiopropik: improvements to the systemic conditions that cause irritation or changes in the gingiva.

I. First Visit
1. Patient history should be obtained
2. Alerts - Clinical signs and diagnosis determination. Bacterial swabs can be used to connect the sign - clinical signs for diagnosis. However, the presence of Bacillus fusiform spirochaete and cannot for the determination of non-marking - the other clinical signs.
3. A. Topical anesthesia is required, depending on the patient’s pain.
   B. Ultrasonic instruments are very important in helping the superficial debridement.
4. Antibiotics may be prescribed if the patient’s body temperature increases or lymphadenopathy occur.
5. Patients were instructed to clean the mouth properly.
6. Notice also:
a. The use of chlorhexidine
b. Reducing or eliminating things that trigger the etiologic factors such as fatigue, alcohol consumption, heavy smoking, and stress.
c. Fixing food intake with vitamin complex (multiple) and additional minerals when needed.

7. Conditions, cause, and effect must be explained to the patient.

II. Second visit (24-28 hours after the first visit)
1. The time it began to show signs of improvement of gingival conditions.
2. Scaling supragingival forwarded, although this time the pain was much reduced. Topical anesthesia can be provided if necessary.
3. Uses mouthwash and eliminate factors that cause other etiologies.
4. Patients should be told to use a soft toothbrush.

III. Third visit (1 week after the third visit)
1. Subgingival scaling and root canal treatment performed
2. Teeth polished
3. Mechanical cleaning teeth evaluated and reviewed
4. Gargling with Chlorhexidine should be reduced or eliminated to eliminate to avoid the emergence of black hairy tongue.

IV. Fourth visit (1 week)
1. Patients are checked for the presence of clinical recurrence.
2. Procedure OH inspected and evaluated again.
3. Created appointment to do a control 1 month later.

V. Fifth Visit
1. Patients checked over ANUG clinical symptoms, gingival contour is not physiological, or pocket depth is still there.
2. Strengthening / emphasize instruction OH.
3. If periodontal health has been restored, it is recommended to return after 3 months.
4. If the shape of the gingival or the depth of the pocket become worse, surgery should be done to fix it.

Patient instructions
1. Gargling
   a. Effective antimicrobial mouthwash to these conditions is 0.12 % Chlorhexidine. Patients can rinse 2 times daily after toothbrush (30-60 seconds).
   b. Other mouthwash is a glass full of a mixture of 3 % hydrogen peroxide with equal parts warm water with a lot. Gargle done with full power for 3-4 minutes. This can be done every 2 or 3 hours for 24 to 48 hours. Once it can be reduced to 3 times a day, usually after meals. Effects arise when unwanted and hydrogen peroxide, can be used to heat water for rinsing.
   c. Gargling with hot water is done with the same technique as when the patient does not wear the usual hot water to rinse. Hot water is used depending on the patient's immune system.

2. Toothbrush with bristles - soft fur and preferably with the Bass method.
3. Importance of diet. Soft diet is recommended during the day - the first day of treatment so that patients feel comfortable when eating. Should be given a supplement if the food is less nutritious.
4. Flossing is recommended to clean the interdental areas soon after the disappearance of the acute symptoms.
5. Improvement interdental cleaning is expected to occur after the entire calculus to help restore the interdental gingival contour - shaped crater.
6. Prophylactic measures that control good done regularly.

Prevention

Prevention of periodontal disease is jointly undertaken by the dentist, patient and personal support. Prevention is by maintaining teeth and prevent attacks and disease recurrence. Prevention starts at healthy periodontal tissues which aims to preserve and maintain the health of the periodontal tissues by using simple techniques and can be used all over the world. Generally, periodontal disease and tooth loss can be prevented
because the disease is caused by local factors that can be found, corrected and controlled. The aim of the treatments is to prevent dental disease became worse.\textsuperscript{6,7}

Prevention of periodontal disease includes several procedures that are interconnected with each other, namely:

1. Controls Plaque
2. Prophylaxis mouth
3. Prevention of trauma from occlusion
4. Prevention by systemic action
5. Prevention with orthodontic procedures
6. Prevention of dental public health education
7. Prevention of recurrence of the disease

1. Controls Plaque

Plaque-control is the most effective in preventing the formation of calculus and is the principal basis of the prevention of periodontal disease, oral health without plaque control cannot be achieved or maintained. Each patient in the dental practice should be given a plaque control program.

- For patients with healthy periodontal tissues, plaque control means health maintenance.
- For patients with periodontal disease, plaque control means healing.
- For patients with post-treatment of periodontal disease, plaque control means to prevent recurrence of the disease.

Plaque control methods are divided into two mechanically and chemically

- Mechanically is the most reliable way, including the use of physical tools using a toothbrush, cleaning tools such proximal dental floss, toothpicks and rinse mouth with water.
- Chemical plaque control is to use mouthwash ingredients - such as chlorhexidine mouthwash (Betadine, Isodine).

2. Prophylaxis mouth
An oral prophylactic teeth cleaning at the clinic, consisting of the removal of material alba, calculus, stain and policing gear. To provide maximum benefit to the patient, oral prophylaxis should be broader and include the following:

- Using a dye solution (disclosing solution) to detect plaque.
- Removal of plaque, calculus (supra and sub gingival) on the entire surface.
- Cleaning and memolis teeth, using pemolis paste / toothpaste
- Use preventive substances present in the polishing paste / toothpaste.
- Checking dental fillings, repair hanging edge.
- Check for signs and symptoms of food impaction.¹¹

3. Prevention of trauma from occlusion

Adjusting relationships teeth are slowly changing (due to the long service). Relationship with the natural tooth cusp improper dental fillings can cause occlusion is not a good habit as bruxism or clenching.

4. Prevention by systemic action

Another way to prevent periodontal disease is a systemic action that increases endurance which also affects the health of the periodontal tissues. An agents such as bacterial plaque can be counteracted action when healthy tissue.

5. Prevention with orthodontic procedures

Orthodontic procedures are very important in the prevention of periodontal disease. The purpose of this orthodontic correction is for maintaining a permanent tooth replacement, tooth position and arch length.

6. Community dental health education

In order to be effective prevention of periodontal disease, preventive measures should be extended to the community dental clinic. It is
important to know the community is evidence that periodontal disease can be prevented by the same method or a more effective method of prevention of dental caries. Public dental health education is the responsibility of the dentist, dental organizations and the Ministry of Health. Effective teaching can be given in the clinic. As for the public may be given by personal contact, activity in community groups, print and electronic media, teen gatherings, schools and other containers.

Needs to be clarified psychological contradiction in society, such as:
- Explain that the damage caused by periodontal disease in adults begin in childhood.
- Eliminate the notion that pyorrhea (bleeding gums) cannot be circumvented and cured. Also eliminates the notion that people lose teeth always happens when they are old.
- Insist that the evidence as dental caries, periodontal disease is usually painless in the beginning so that people do not realize it. Examination of the teeth and mouth regularly required to determine the presence of dental caries and periodontal disease as soon as possible and then immediately take care of him when it found the presence of disease.
- Provide an explanation that periodontal treatment is effective if treated promptly so more than likely been successfully treated. Besides, time is used less and is the most economical way than tackling the disease.
- Affirm the benefits of prevention with good oral hygiene and regular dental care.
- Explain that the act of oral disease prevention must be at the core of public dental health plan.

7. Prevention of recurrence of the disease

Once the network health is achieved, the necessary positive program for prevent recurrence of periodontal disease. It is a shared responsibility between dentist and patient (for pediatric patients the role of parents is also needed). Patients must obey the setting to keep oral hygiene and regular visits, dentist must make regular visits as useful preventive care.
DISCUSSION

Acute Necrotizing Ulcerative Gingivitis is a specific gingivitis, is characterized by the presence of signs of gingival inflammation and necrosis, accompanied by pain, gingival bleeding, taste and bad breath/halitosis, and no complex infectious etiology. The etiology of the disease is not known precisely. Some researchers believe that ANUG is the primary disease caused by *Borrelia fusiform* and *bacillus vincentii*. It is most likely that several factors influenced ANUG secondary etiologies such as stress and anxiety. Can also be influenced by other factors such as fatigue, decreased endurance, malnutrition, smoking, viral infections, lack of sleep, in addition to other local factors influenced.

In the clinical manifestations are shaped like a crater lesions (ulcers) in the proximal part of the extensive necrotic areas, covered/not covered pseudomembrane layer of grayish-white color, which is experiencing an acute inflammatory lesions increase the rapid attack of pain, bleeding and very sensitive to the touch. Keratinized gingiva, oedem and chipped epithelial. There are complaints halitosis, damage the lymph glands, fatigue and burning feeling.

Care for patients ANUG, in addition to eliminating the etiological factors. Care scaling and root planing done regularly and done regularly. If treatment is stopped when the acute phase has passed, there will be a recurrence. According to Hartnett and Shiloah (1991) ANUG recurrence associated with the persistence of gingival damage, surgical treatment is carried out on the area of damage. Usually done gingivoplasty at 1 month after the acute infection, to obtain adequate plaque control and to reshape and form physiologic gingival contour. However gingivoplasty broad for improving your gingival form, must sacrifice healthy gingival margin on the buccal or lingual region. The need for consideration of surgery like this, especially in the anterior region that have less esthetic appearance.

CONCLUSION

Acute Necrotizing Ulcerative Gingivitis is a disease with a multifactorial etiology, whether caused by bacteria, local factors such as
oral hygiene, tooth position, restoration, traumatic occlusion and smoking as well as systemic factors are like malnutrition and emotions. In ANUG treatment, must be done thoroughly and scheduled to prevent disease recurrence. Scaling - root planing and curettage can be done repeatedly to stimulate regeneration of the interdental papilla. In addition to scaling and root planing treatment, also performed surgical approach to repair the high degree of gingival defects, such as gingivoplasty.

Summary

Acute Necrotizing Ulcerative Gingivitis (ANUG) with another name Trench Mouth or Vincent's Disease is a gingivitis specific in the mouth, is characterized by the presence of signs of inflammation and necrosis of gingival, accompanied by pain, gingival bleeding, taste and smell of the mouth is not tasty/halitosis, noninfectious also caused by complex etiology.

Acute Necrotizing Ulcerative Gingivitis often give you an idea as epidemic disease pattern, about a group of people who were in close contact, especially in the same environment. In a group of people in less developed Countries with lower socioeconomic levels have been reported about the incident ANUG. From the results of research conducted in India ANUG incidence data obtained 54 % in some patients with usaia under 10 years old. Studies in children ages 2-6 years in Nigeria with a random manner, the data obtained was 11.3 % ANUG incidents and 23 % in the population of children in hospitals with under 10 years of age.

Illustrates the pattern of spread of this disease is an infectious nature. Lesions may extend to the cheeks, lips, tongue palate, pharyngeal region even just with adjacent lesions with the healthy tissues. Ulcerative lesions may develop involving the alveolar process is accompanied sequester teeth and bones, until the process of forming a hole / triangular space between teeth due to bone loss.

The etiology of the disease is not known precisely. Some researchers believe that ANUG is the primary disease caused by Borrelia fusiform and bacillus vincentii. It could be argued that because symbiosis Fusospirocheta consisting of B. fusiformis and B. vincentii suspected as the main cause of
this disease. ANUG influenced by several factors secondary etiologies such as stress and anxiety. The occurrence ANUG not only caused by microorganisms, but supported also by the presence of predisposing factors other factors such as fatigue, decreased endurance, malnutrition, smoking, viral infections, lack of sleep, in addition to other local factors influenced. Based on the severity of the abnormality location, ANUG divided into:

Phase I: Just the tip of the interdental papilla were exposed, showed the bleeding when done probing.

Phase II: Necrosis of the interdental papilla and the gingival margin and the presence of ulceration of the oral mucosa.

Phase III: in addition to the attached gingiva and interdental papilla and marginal gingiva may occur coalition of some adjacent areas.

Stage IV: There nekrotisasi conditions below the gingival tissue (gangrenous stomatitis).

Phase V: Necrosis of soft tissue to bone opening, bone necrosis, bone sekuesterasiasi possibility alveolar process (NOMA)

Phase VI: alveolar bone necrosis and / or facial tissue destruction.

Clinical symptoms often occur suddenly, with localized or diffuse pain in the gingiva. Patients often feel spontaneous gingival bleeding, hypersalivation, discomfort or iron taste in the mouth and a bad smell. The lesions are often covered pseudomembrane white to gray base closing and shape the necrotic inflammation consisting of inflammatory cells and microorganisms. Specific lesions such as necrotic ulceration and interdental papilla blunt. Mucosal ulceration can occur on the lips, cheeks and tongue where the tissue in contact with the gingival lesions or due to trauma. Can also occur on the palate and pharynx region but rarely found. Ulceration can develop into alveolar process with sequester teeth and bones. If there is bleeding that stands out, the tooth surface can be brown and smelly mouth becomes sharper.

Lymph nodes are usually slightly enlarged or obvious lymphadenopathy occurs mainly in children. Calculus is often collected on an ulcerated papilla shaped like a crater and bleed easily. Lost sense of taste and bad taste when smoked. Noticeably protruding teeth and sestitif to pressure.
The increase in temperature occurs in cases of mild to moderate and high fever in severe cases.

In the short term, the first act consisted of oral hygiene therapy, including mechanical cleaning and removing debris in the place concerned. Local treatment with metronidazole systemically performed for 3-5 days. There is a response to the administration of systemic antibiotics and local debridement. The symptoms gradually disappear over 3-4 weeks, but often recurrent. In the long term, hygiene therapy to prevent further damage to the gingival should be done (Lynch et al., 1994; Lewis & Lamey, 1998).

Some researchers say that ANUG recurrence in the interdental papilla due to the crater. With curettage and repeated plaque control can be the regeneration of damaged papilla. Anyhow, the main failure of treatment ANUG is premature discontinuation of therapy after the acute symptoms subside. When the acute symptoms subside, the patient with ANUG will not follow the recommended treatment and subsequent therapy visits. Therefore patients should be informed clearly that the high potential risk of recurrence and the importance of follow-up. If the curing is done early and done quickly and accurately, gingival damage can be prevented. In most cases the formation of the crater caused by the delay in treatment or the occurrence of recurrent exacerbations.

Persistence recurrences of ANUG associated with gingival damage, surgical treatment is carried out on the area of damage. Prevention of periodontal disease is jointly undertaken by the dentist, patient and personal support. Prevention is by maintaining teeth and prevents attacks and disease recurrence. Prevention of periodontal disease includes several procedures that are interconnected with each other, namely: plaque control, oral prophylaxis, prevention of trauma from occlusion, systemic preventive measures, preventive orthodontic procedures, preventive dental health public education and prevention of disease recurrence.

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