

A Review of Diagnosis, Aetiology and Treatment of Acute Necrotizing Ulcerative Gingivitis (Stage I Noma) among Dental Healthcare Providers in Nigeria

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INTRODUCTION

Acute necrotizing ulcerative gingivitis (ANUG) is acute infection of the gingiva characterized interdental necrosis, "punched out" ulcerated papillae, gingival bleeding and pain and usually diagnosed at the onset of specific clinical signs and symptoms. The synonyms-Vincent's disease, fusospirochetal gingivitis, trench mouth, acute ulcerative gingivitis, necrotizing gingivitis, and acute NUG. The diagnostic triad is ulcer bleeding and pain (Atout & Todescan, 2013). ANUG which is a distinct and specific form of periodontal disease has increasing prevalence and incidence in developing countries including Nigeria due to increasing poverty, poor nutritional status and immunosuppressive state like HIV/AIDS. Acute necrotizing ulcerative gingivitis (ANUG) has a rapid onset and is debilitating, it usually resolves quickly

and does no serious harm if adequate treatment is instituted.

- Clinical staging of ANUG (Horning & Cohen, 1995)
- Stage 1 necrosis of only tip of interdental papilla
- Stage 2 necrosis of the entire papilla
- Stage 3 necrosis also involving the marginal gingiva
- Stage 4 necrosis extending also into attached gingiva
- Stage 5 necrosis extending into buccal or labial mucosa
- Stage 6 necrosis exposing alveolar bone
- Stage 7 necrosis perforating the skin of the cheek

Dental healthcare providers are needed to quickly diagnose and institute success-oriented treatment. This can be achieved if dentists have adequate ANUG

knowledge and high index of suspicion. I could only retrieve a study from the literature assessing knowledge of ANUG as a disease (Vignesh et al 2017). Hence this study. The movement of Dentists in Nigeria was from south to North because initially there were no Dental schools in the Northern Nigeria where this condition is more so studying Dentists in South on ANUG is justifiable. The objective of the study was to assess the level of knowledge of aetiology, predisposing factors, diagnosis, treatment and prevention of acute necrotizing ulcerative gingivitis (Stage I Noma) among dental professionals in Nigeria

MATERIALS AND METHODS

This Cross-sectional study was conducted among Final dental students and all categories of dentist working in dental center working in University of Benin Teaching Hospital, Benin City between September to October, 2022. The data collection tool was a 34-item, self-administered questionnaire developed from the literature was the data collection tool. The questionnaire assessed the demographic characteristics, knowledge (transmissibility, aetiological organisms, predisposing factors, signs & symptoms, diagnosis, treatment and prevention of ANUG) and opinion on government policy that can best stop ANUG. Informed consent was obtained from participants. Data analysis was done using SPSS version 23.0.

RESULTS/DISCUSSION

The majority of the participants were males (60.3%), were aged 21-40 years (77.6%) and were registrars

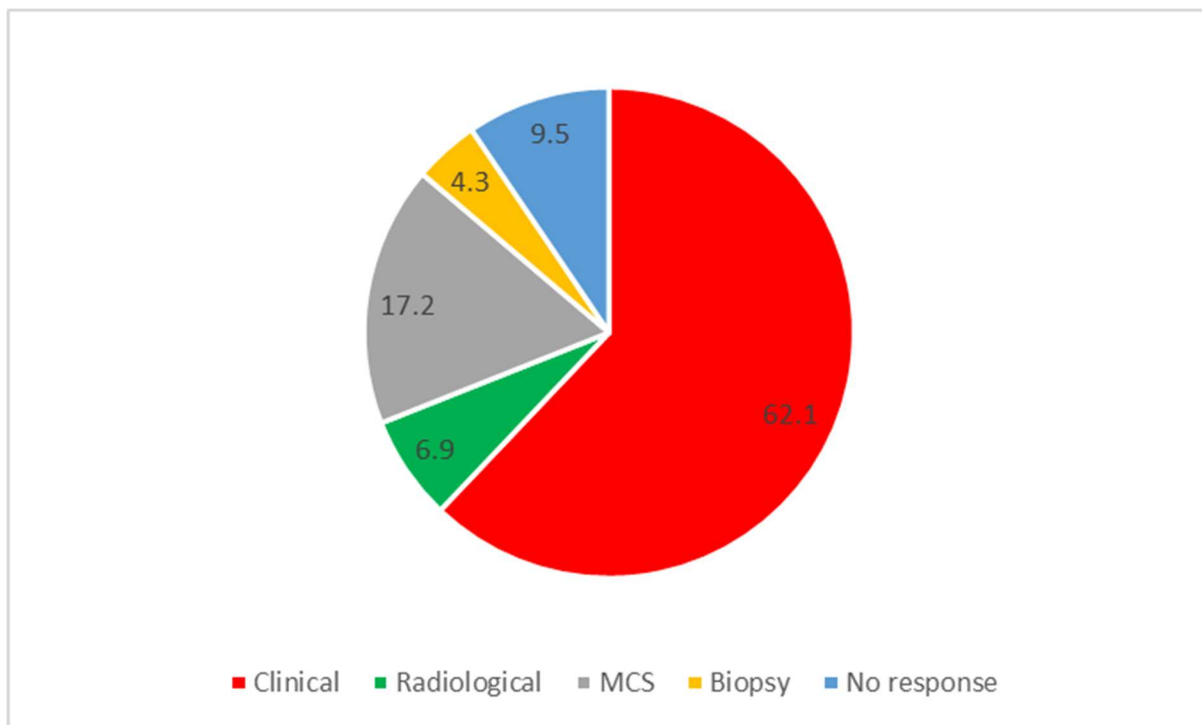
(38.8%). About a quarter (26.7%) of the participants thought ANUG can be transmitted from one person to another. About one-fifth (21.6%) of the participants reported correctly the non-implicated organism in ANUG. More than three-quarters of the participants reported psychological stress and anxiety (88.8%) and smoking (84.5%) as a predisposing factor to ANUG. Majority (88.8%) of the participants reported that patients with ANUG may experience fever and malaise while 58.6% of the participants reported punched out ulcer of interdental papilla as a sign of the disease. About two thirds (62.1%) of the participants reported that diagnosis of ANUG is through clinical examination. This is good but still worrisome because delay in intervention can occur when awaiting other diagnostic modalities like radiological, MCS and biopsy. On assessment of treatment, debridement was considered very effective is management of ANUG by 66.4% of the participants 90.5% of the participants stated that high fluid intake is an important part of supportive care for ANUG (80.2%) reported. Six-tenth (60%) was similarly reported among Indian dental students (Vignesh et al. 2017). Hydrogen peroxide & chlorhexidine as recommended mouth rinse treatment and only about half (52.6%) of the participants reported metronidazole as the preferred drug in treatment of ANUG. Majority of the participants opined that twice daily teeth cleaning (93.1%) and regular dental check-up (95.7%) can help in preventing ANUG. About four-tenth (44.4%) of the participants reported poverty alleviation programme as Government policy that will best help to prevent ANUG

Table 1A: Demographic Characteristics of participants

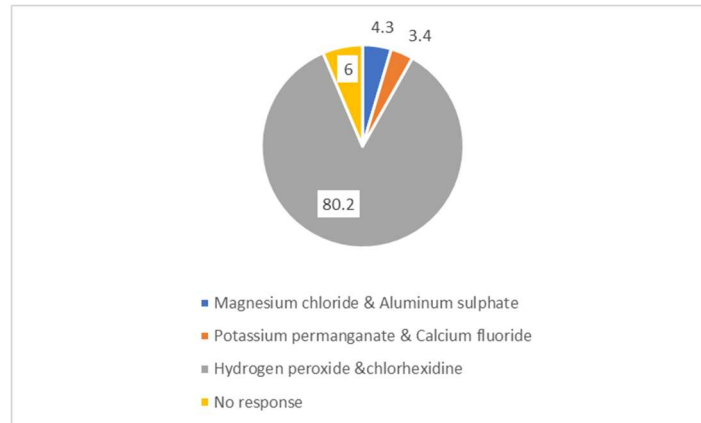
Variable	Frequency	Percent
Age (years)		
18-20	2	1.7
21-30	42	36.2
31-40	48	41.4
41-50	21	18.1
51-60	3	2.6
Gender		
Male	70	60.3
Female	46	39.7
Status		
Dental Students	31	26.7
House officers	9	7.8
Registrar	45	38.8
Senior Registrars	19	16.4
Consultants	12	10.3
Total	116	100.0

Table 1B: Level of Knowledge about ANUG among participants

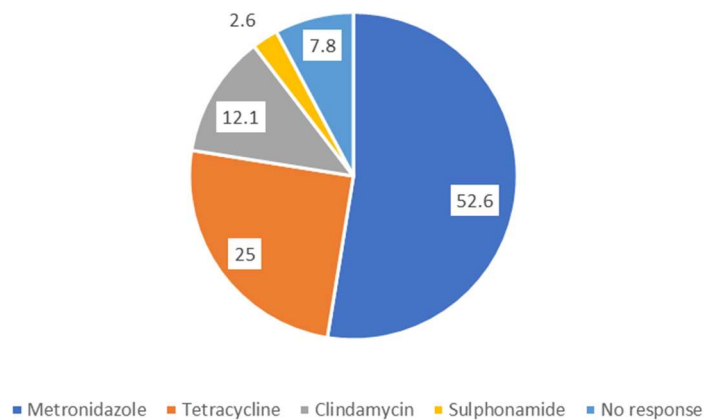
Variable	Frequency	Percent
Insufficient sleep	59	50.9
Uncontrolled DM	74	63.8
Smoking	98	84.5
Psychological stress	103	88.8
HIV/AIDS	111	95.7
Malnutrition	108	93.1
Debridement	77	66.4
Fluid intake	105	90.5
Twice daily brushing	108	93.1
Dental check up	111	95.7



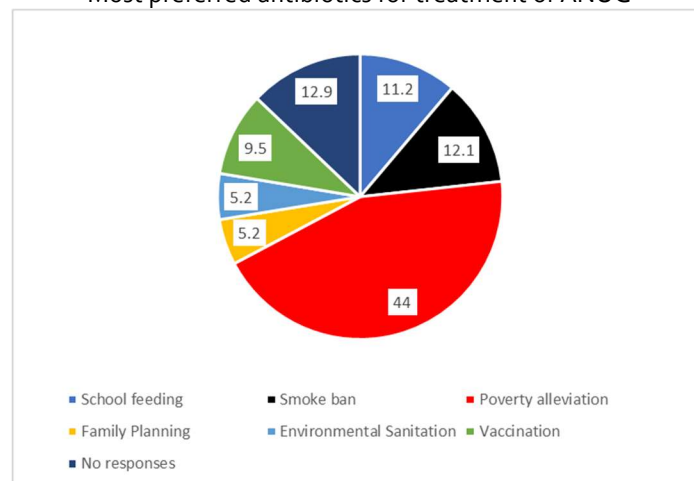
Main method of Diagnosis of ANUG



Chemical of Choice in treatment of ANUG



Most preferred antibiotics for treatment of ANUG



Government policy that will best help to prevent ANUG

CONCLUSION

The limited knowledge of Acute necrotizing ulceration among dental professional deserves necessary attention. Targeted attention to Dental educators to put emphasis on the teaching of ANUG

NDA to consistently make it a continuing education topic Poverty alleviation programme of Nigerian Government should be reactivated to help in preventing ANUG

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