



Received on 15/05/2012;

Revised on 23/06/2012;

Accepted on 25/07/2012

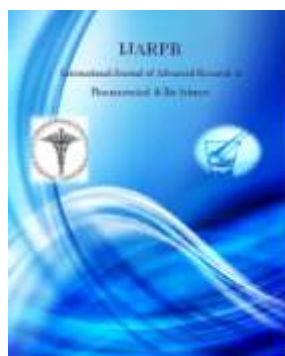
## Assessing Tooth Erosion Amongst Alcoholics in the Ndop Health District, Cameroon

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### ABSTRACT

The aim of this study was to assess tooth erosion amongst alcoholics in Bamunka, a village in the North West Region of Cameroon. A cross – sectional hospital based descriptive study was undertaken in which 103 participants who had been living in Bamunka for the past three years preceding this study were randomly selected to take part. A Short Alcoholic Dependence Data (SADD) questionnaire was used to obtain information and establish the alcoholic status of the participants. Visual dental examination was used to establish tooth erosion lesions followed by an interview carried out to differentiate tooth erosion as a result of alcohol from those resulting from other causes. Results obtained showed that majority (60.4%) of the participants had tooth erosion of varying severity. Amongst these, most of the alcoholics (53.06%) had tooth erosion of severity level 1. This study showed a significant association between tooth erosion and alcohol consumption. In conclusion, alcohol is a major cause of tooth erosion amongst alcoholics in Bamunka.

**KEYWORDS:** Tooth erosion, alcoholic, Ndop Health District, Bamunka, Cameroon

**(Research Article)****INTRODUCTION**

Tooth erosion has been recognized in the dental literature for more than 200 years (Lazarchik and Filler, 1997). The first case of tooth erosion was reported as early as the 19<sup>th</sup> century (Royston, 1808) and since then, the incidence and prevalence of dental erosion is increasingly being reported (Nunn, 1996). Loss and excessive wear of hard dental tissues is a permanent problem of the dentition that affects all age groups and is regarded as an inherent part of aging process and a modern day problem for dentists (Bartlett and Dugmore, 2008). Although the aetiology of tooth wear is multi – factorial, most studies in recent times indicate that alcohol may be one of the major causes of tooth erosion (Bader *et al*, 1996; Smith *et al*, 1997; Osborne – Smith *et al*, 1999; Deery *et al*, 2000). A review of the literature on dental erosion indicates a relatively recent growing interest in the topic particularly in Europe, which according to WHOROE (2006), has the highest alcohol intake in the world. We were therefore prompted to carry out a similar study to assess tooth erosion amongst alcoholics in Bamunka, Cameroon since alcohol is an allowed drug in Cameroon and many people are at risk of falling into alcoholism.

**MATERIALS AND METHODS****Study area**

This cross – sectional hospital based descriptive study was carried out at the Ndop District hospital in Bamunka, a village in Ndop Sub – Division in the North West Region of Cameroon.

**STUDY POPULATION**

A total number of 103 adult male and female participants who have been living in Bamunka village for the preceding 3 years before this study were randomly selected to take part. Selection was based on willingness to take part in the study.

**Data collection**

A Short Alcohol Dependence Data (SADD) questionnaire was administered face – to – face to selected participants to collect data. Also, data was generated by visual dental examination and a personal interview with each alcoholic participant.

**Data analysis**

Data collected was edited and statistical analysis carried out using SPSS version 17.0 and erosion graded according to the Eccles and Jenkins criteria for severity level of erosions.

**Ethical considerations**

Authorization to carry out this research was sought from the chief medical officer of the Ndop District Hospital. Survey data was collected after the individual participants read and signed an informed consent form. Also, full confidentiality and individual's rights were maintained.

**RESULTS**

The demographic profile of the respondents is shown in table 1. Majority of the respondents were males (85.44%) and most of them (30.1%) were within the age range of 30 – 39 years, 54.46% were unmarried and 38.83% had 1 – 5 years schooling.

**(Research Article)****Table 1:** Demographic Profile of the Respondents

<b>Variable</b>	<b>Percent</b>
<b>Sex</b>	
Male	85.44
Female	14.56
<b>Age Distribution (Years)</b>	
20 – 29	17.48
30 – 39	30.1
40 – 49	29.13
50 – 59	12.62
60 and above	10.67
<b>Marital Status</b>	
Never Married	51.46
Married	42.76
Divorced/others	5.82
<b>Educational Status</b>	
No Education	34.95
1 – 5years schooling	38.83
6 – 10years schooling	19.42
11years or more schooling	6.80

**Alcoholics and Non – alcoholics**

Majority (78.64%) of the respondents were alcoholics with a greater percentage (90.12%) made up of males

**Table 2:** Alcoholics and Non – alcoholics

<b>Variables</b>	<b>Percent</b>
Alcoholics	76.64
Non – alcoholics	21.36
<b>Male alcoholics</b>	
Male alcoholics	90.12
<b>Female alcoholics</b>	
Female alcoholics	9.88

**(Research Article)****Presence of Erosion Amongst Alcoholics**

level contributing to the greatest severity level (53.06%)

Most (60.49%) of the alcoholics had erosion experience with grade 1 severity

<b>Variables</b>	<b>Percent</b>
Presence of Erosion	60.49
No Erosion	39.51
<b>Severity Level</b>	
Grade 1 Erosion	53.06
Grade 2 Erosion	32.65
Grade 3 Erosion	14.29

**DISCUSSION**

This study was limited to the rural population of Bamunka village in the Ndop sub – division where majority of the participants (38.83%) had 1 – 5 years of schooling followed by 34.49% with no education. This is typical of most rural population where schools are hardly available and even when there are; the financial means to meet up with schooling is unavailable.

Majority of the respondents (78.64%) were alcoholics. This actually confirms the fact that most Cameroonians are at risk of falling into alcoholism since alcohol is an allowed drug in Cameroon with no moderation to its consumption. With this high percent in the rural area, the researchers postulate that the percent will be higher in urban areas since the financial means are available.

In this study, majority (60.49%) of the alcoholics had erosion of varying degrees. This is comparable to the study of Ibiyemi *et al*, 2010 who showed that 58.9% of alcoholic consumers had tooth wear lesions and also similar to the

report of Taiwo *et al*, 2005 who reported a prevalence of 58.6% of tooth wear amongst alcoholics. This result however is not in line with the findings of Saerah *et al*, 2006 who reported a 26.0% tooth wear. This may be due to the age difference of the participants since the participants in Saerah *et al*, 2006 were aged 16 years.

Chronic alcoholism is usually associated with regurgitation. However, there was no relationship between regurgitation and tooth erosion in this study as regurgitation was an uncommon practice amongst the study group involved in this research.

**CONCLUSION**

Overall, alcoholics in this study presented high tooth wear with low severity of tooth erosion lesions. We suggest that this study be used as a good background to formulate further epidemiological studies and an effective health promotion programs to prevent dental erosion amongst alcoholics.

**(Research Article)****ACKNOWLEDGEMENT**

The authors would like to thank Dr. Nick Ngwanyam, C.E.O of St. Louis Group and the chief medical officer of the Ndop District Hospital.

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