

# A comparative epidemiologic study of oral cancer in Iran and Nigeria

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## Abstract

With regard to the oral cancer of the squamous cell variety, this study compares the clinicopathologic findings in 52 patients of the Igbo ethnic group living in Southeastern Nigeria with the 370 cases reported for the mostly Irano-Afghan racial group in Fars Province, Iran. Lip cancer was the commonest site in Iran whereas it was uncommon in Nigeria except for albinos. This indicates the etiologic role of sunlight. As in Tanzanian and Ugandan reports, Igbo women suffering from oral cancer outnumbered the male counterparts. This disparity is open to research in terms of sideropenia which is blamed for the relatively high incidence of oral cancer in Swedish women. Treatment on the whole pertains not to drugs but to surgery on relatively young elements who are albinos.

**Keywords:** Oral cancer; Epidemiology; Nigerians; Tanzanians;

## Introduction

According to Hutt, geographical pathology can be regarded as the study of the experiments carried out by Nature in different parts of the world in terms of the prevailing disease patterns [1]. Interestingly, Fahmy and associates sent to the author a reprint from Iran concerning an epidemiologic study of oral cancer in the country's Fars Province [2]. From its detailed accounts, one of the facts that stood out was the reference to the extreme rarity of lip cancer among Negroes and dark skinned people. The recently

published descriptive study of the epidemiology of oral cancer in Africa pointed to its lower incidence when compared with worldwide frequency [3]. Therefore, for the sake of comparison, this paper reports on the Igbos or Ibos, who constitute one of the three main ethnic groups in Nigeria, West Africa [4].

## Materials and Methods

Between 20th February 1970, when the Nigerian Civil War had just ended, and 19th February 2000, the author ran a reference laboratory handling surgical specimens obtained in several hospitals by doctors working among the Igbos. The data are analyzed and compared with the tabulations of the squamous cell carcinomas which were presented from Iran. Owing to the local lack of precision as regards buccal mucosa, floor of mouth, gingival and alveolar ridge, all these are grouped together under mouth.

## Results

[Table-1] compares the age, sex and affected different oral regions in Iran and Nigeria. The Iranian figures are tabulated above the Nigerian ones for ease of comparison.

It is striking that the commonest site is the lip in Iran and the palate in the Igbo group. In Nigerians, the upper lip and the lower lip suffered equally. On the whole, female Nigerian patients outnumbered their male counterparts in the ratio of 28:24, i.e., 1.2:1.

**Table 1:** Age, sex and affected different oral regions in 370 consecutive squamous cell carcinomas in Iranians compared with 52 Nigerian data below them.

Age group Years:	-25			25-34			35-44			45-54			55-64			65-74			75+			All ages		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
<b>Lip</b>	3	1	4	12	3	15	15	3	18	34	7	41	63	11	74	23	4	27	6	1	7	156	30	186
	0	0	0	1	2	3	0	0	0	2	1	3	0	0	0	0	1	1	0	0	0	3	4	7
<b>Mouth</b>	0	0	0	1	1	2	10	3	13	18	6	24	25	6	31	12	3	15	5	0	5	71	19	90
	0	0	0	0	1	1	1	1	2	2	3	5	0	2	2	3	1	4	0	2	2	6	10	16
<b>Tongue</b>	3	2	5	2	1	3	17	4	21	20	4	24	10	2	12	6	1	7	2	1	3	60	15	75

	0	0	0	0	1	1	1	0	1	2	3	5	1	1	2	3	2	5	1	0	1	8	7	15
Palate	0	0	0	1	0	1	1	0	1	5	1	6	4	1	5	3	1	4	2	0	2	16	3	19
	0	1	1	1	0	1	1	0	1	1	3	4	4	1	5	0	2	2	0	0	0	7	7	14
	6	3	9	16	5	21	43	10	53	77	18	95	102	20	122	44	9	53	15	2	17	303	67	370
	0	1	1	2	3	5	2	1	3	5	6	11	5	3	8	3	6	9	0	2	2	24	28	52

**Discussion**

This study demonstrates that oral cancer is uncommon in the Igbo ethnic group in Nigeria. This is not due to lack of interest among the physicians. Thus, in an earlier study devoted to the lip, there were 16 lesions submitted by 13 physicians working in 8 hospitals, the commonest disease being pyogenic granuloma [4]. Since the only two carcinomas of the lip in that study occurred in albinos, it had been suggested that albinism should be added to the world’s list of etiologic factors. This view is strengthened by the present data in which only one of the six squamous celled growths occurred in a dark skinned patient.

The question of age was considered in skin cancer in blacks by Mora and Perniciaro [5]. Their youngest patient was an albino. The effect of age is confirmed in the present lip series in that the affected albinos were relatively young whereas the only dark skinned patient was aged 70 years. Apparently, the carcinogenic effect of sunlight materializes only after many years if the patients are protected by their dark pigmentation.

The recently published descriptive study of the epidemiology of oral cancer in Africa pointed to its lower incidence when compared with worldwide frequency [6]. It also spotlighted the roles of tobacco and alcohol as risk factors elsewhere. These elements are certainly not of common use among the Igbos of Nigeria.

The Iranian series showed the preponderance of males among the sufferers in the ratio of roughly 5:1. Curiously, females outnumbered males in this African community. This is open to research especially in terms of sideropenia in the Plummer-Vinson syndrome. Regarding this syndrome, Bailey & Love’s text-book exemplified with Swedish women who have a higher incidence of oral cancer attributable to sideropenia [7]. Certainly, as far as female preponderance is concerned, the Igbo pattern is in consonance with what Templeton found in Uganda [8].

Concerning etiology and risk factors of oral cancer, an Indian group included radiation and ethnicity [9]. In conclusion, treatment on the whole pertains not to drugs but to surgery. No doubt, this should be performed on relatively young elements who are albinos. Moreover, health education should be pursued, and there ought to be statutory indoor employment [10-11].

**Conclusion**

Treatment, on the whole, pertains not to drugs but to surgery. No doubt, this should be performed on relatively young elements who are albinos. Moreover, health education should be pursued [10]. I am persuaded, as I propounded elsewhere, that there ought to be statutory indoor employment [11].

**References**

- Hutt MSR. The geographical approach in medical research. *Pathol Microbiol (Basel)*. 1972;38(3):161-166.
- Fahmy MS, Sadeghi A, Behmard S. Epidemiologic study of oral cancer in Fars Province, Iran. *Community Dent Oral Epidemiol*. 1983;11(1):50-58.
- Basden GT. *Niger Ibos*. London: Cass, 1966.
- Onuigbo WIB. Lip lesions in Nigerian Igbos. *Int J Oral Surg*. 1978;7(2):73-75.
- Mora RG and Perniciaro C. Cancer of the skin in blacks. I. A review of 163 black patients with cutaneous squamous cell carcinoma. *J Am Acad Dermatol*. 1981;5(5):535-543.
- Parkin DM, Ferlay J, Hamdi-Chérif M, Sitas F, Thomas JO, Wabinga H, et al. *Cancer in Africa, Epidemiology and prevention*. IARC Scientific Publications No. 153. Lyon: IARC Press, 2003;161-162, 353-358.
- Bailey and Love’s *Short Practice of Surgery*. London: Arnold. 2000; 639.
- Templeton AC. *Tumours in a tropical country*. Berlin: Springer.1973;28-29.
- Kumar M, Nanavati R, Modi TG, Dobariya C. Oral cancer: Etiology and risk factors: A review. *J Cancer Res Ther*. 2016;12(2):458-463. Doi: 10.4103/0973-1482.186696
- Onuigbo WIB. No albino should suffer from extensive skin cancer let alone die there-from. *J Cancer Prev Curr Res*, 2015; 2(3):00040. Doi: 10.15406/jcpr.2015.02.00040
- Onuigbo WIB. The influence of Pott’s irritation theory of occupational cancer during the 19th Century: A review with hypothesis on albinism sunlight induced cancer. *J Cancer Prev Curr Res*, 2015;2(5): 00053. Doi: 10.15406/jcpr.2015.02.00053