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AIDS-ASSOCIATED KAPOSI'S SARCOMA IN SOKOTO, NIGERIA.

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ABSTRACT

Background: Since the advent of the HIV/AIDS pandemic, Kaposi's sarcoma (KS) is now seen in places not previously considered endemic for this disease. In Nigeria, the African-endemic KS had been known to be prevalent in the southern parts of the country, particularly the southeast. Until now, reports on the disease from northern Nigeria are few.

Objective: To describe the prevalence of Kaposi's sarcoma in Sokoto, northwestern Nigeria.

Method: A retrospective review of 27 cases of histologically confirmed KS seen over an 11-year period (Jan.1994-Dec.2004) at the Usmanu Danfodiyo University Teaching Hospital (UDUTH), Sokoto, Northwestern Nigeria.

Results: The average hospital incidence of KS in this review was 2.5 cases per annum (27 cases in 11 years). The modal age was the 4th decade of life (range 18-70 years). Fifteen percent were females; M: F =5.8: 1. There was no case of childhood involvement identified. More cases of the disease were HIV-positive (59.3%). The commonest symptom was cutaneous nodules in 96.3% of cases. The body region with the highest affectation of the lesions was the lower limb (70.4%).

Conclusion: Kaposi's sarcoma is still uncommon in the northwestern region of Nigeria. The epidemic variant of the disease predominates among the few cases diagnosed. The finding of nodular lesions and/or indurated leg swelling in any adult male in our environment must be considered to be KS until histologically investigated.

Key Words: Kaposi's sarcoma, Prevalence, Northwestern Nigeria, HIV/AIDS. (*Accepted 11 April 2007*)

INTRODUCTION

The HIV/AIDS pandemic has made Kaposi's sarcoma (KS) a global disease prevalent in regions previously unknown for the illness[1, 2]. There are four recognizable variants, namely the epidemic, endemic, classical and iatrogenic forms[3,4,5]. Common to all types of this condition is the presence of human herpes simplex virus type 8 (HHSV-8) otherwise known as Kaposi's sarcoma herpes virus (KSHV) in the lesions[6, 7]. In Nigeria, the endemic variety has been described in the southern parts of the country[8, 9]. The disease pattern in the northwestern region however remains unknown. This review was therefore carried out to describe the prevalence of KS in northwestern Nigeria. Findings obtained would form the basis for an ongoing prospective interventional study on the disease in our center.

PATIENTS AND METHODS

Study location: Usmanu Danfodiyo University Teaching Hospital (UDUTH) is a 500-bed tertiary health institution. It is situated in Sokoto town, the capital city of Sokoto state. This state is located in the northwestern region of Nigeria and shares a common boundary with Niger republic. The catchment areas of the hospital besides Sokoto state include two other states in the northwestern part of the country (i.e. Kebbi and Zamfara states) as well as parts of the neighboring Niger republic.

Study population: This brief report is a retrospective review of all histologically confirmed cases of Kaposi's sarcoma seen in UDUTH from January 1994 to December 2004. The data used were retrieved from the histopathology records and patients' case-notes obtained from the medical records department. The patients were reviewed with respect to their age, gender, clinical presentation and retroviral status.

Data analysis: The information obtained was analyzed using simple arithmetic mean, frequency distribution and presented in tables.

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RESULTS

A total of 27 patients were reviewed comprising 23 males (23, 85%) and 4 females (4, 15%) with a male-female ratio of 5.8:1. Their ages ranged from 18 to 70

The commonest presenting symptoms were multiple nodular lesions (n=26/27 or 96.3%) and limb swelling/induration (n=23/27 or 85.2%) (table 2). Sixteen (1, 59.3%) of the cases tested positive for Human Immunodeficiency Virus (HIV) by double ELISA method. The duration of cutaneous symptoms prior to hospital presentation averaged 7 months (range 0.8-12 months) among the HIV-positive patients, and 137 months (range 36-240 months) in the HIV-negative individuals.

The distribution of the lesions was in the lower limb in 19 patients (70.4%), upper limb in 3 cases (11.1%) and generalized in 5 others (18.5%) (figs. 1 and 2, table 3).

All cases studied were blacks from sub-Saharan Africa and none had organ transplant or immunosuppressive therapy prior to onset of the disease.

Table 1: **Age And Gender Distribution of Kaposi's Sarcoma In Sokoto, Nigeria**.

Age (years)	Male	Female
0-9	-	-
10-19	-	1
20-29	5	3
30-39	11	-
40-49	3	-
50- 59	2	-
> 60	2	-
Total	23	4

Table 2: **Clinical Features of Kaposi's Sarcoma In Sokoto, Nigeria**.

Symptoms/Signs	No of Cases	%
Multiple Nodles	26	96.3
Limb Swelling/Induration	23	85.2
Ulcers	17	63.0
Itching	15	55.6
Bleeding Lesions	11	40.7
Painful Nodules	9	33.3
Hyperpigmentation	5	18.5
Enlarged Regional Lymph Nodes	5	18.5
Solitary Cutaneous Nodule	2	7.4

Figure1: **Kaposi's sarcoma of the lower limb**

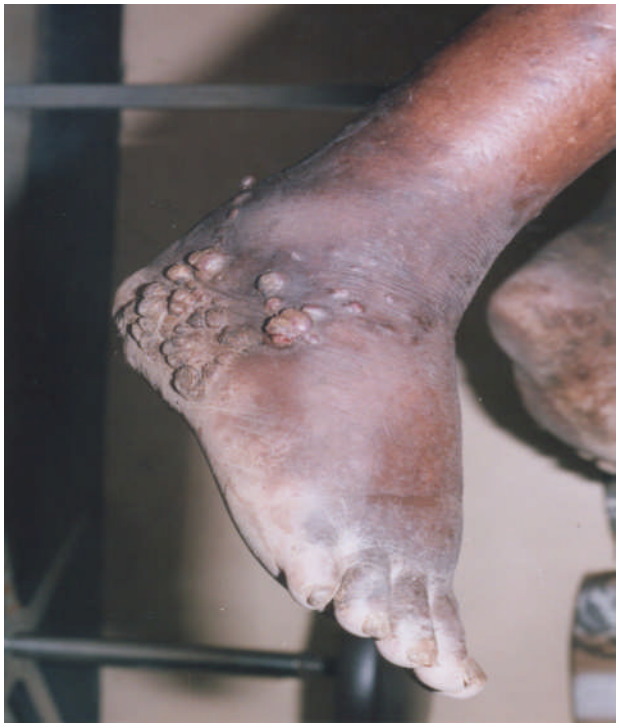

Figure 2: **Kaposi's sarcoma of the upper limb**

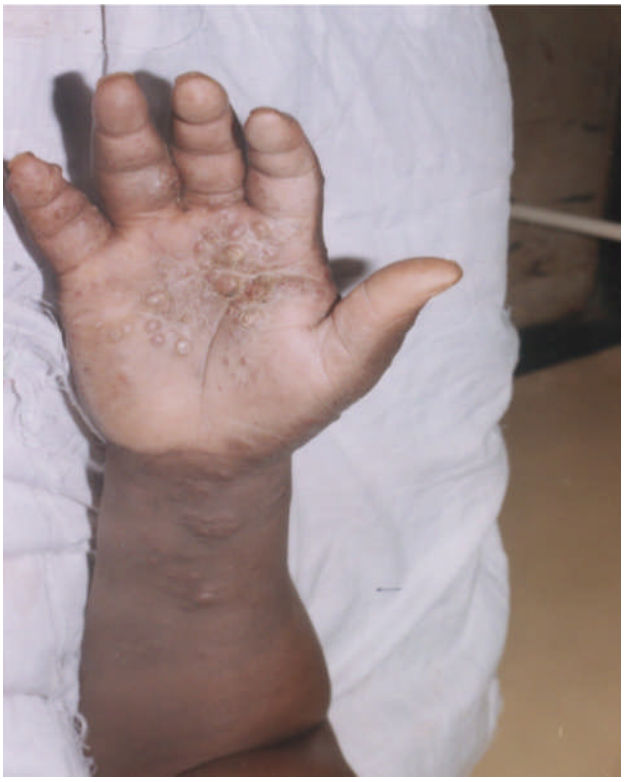

Table 3: **Site Distribution And Retroviral Status of Kaposi's Sarcoma Cases In Sokoto, Nigeria**.

Body Region	M	F	Total(%)	No. of HIV* + Cases
Lower Limbs/ Buttocks only	15	4	19(70)	11
Generalized	5	-	5(19)	5
Upper Limbs Only	3	-	3(11)	-
Total	23	4	27(100)	16

*HIV = Human immunodeficiency virus.

DISCUSSION

With an average annual hospital incidence of 2.5 cases per year (27 cases in 11 years) seen in this review, KS is an uncommon disease in the northwestern part of Nigeria. This observation is in contrast with the higher prevalence reported from the southern regions of the country[8,9]. In our review, the disease predominantly affects males, corroborating other reports.[1,2,8,9]. However, the finding of about 15% of the cases in females in this series contrasts sharply with earlier reports on the African-endemic type of KS which affected only males[8, 9]. The different epidemiological variants of the disease therefore exhibit different gender predilections.

The current audit reveals an adult-only disease pattern with an overall modal age in the 4th decade of life. No case of childhood involvement was identified quite unlike the finding in some previous accounts[10-14]. It is possible that childhood lesions of KS in this part of the country are being confused with other similar lesions like congenital haemangioma, pyogenic granuloma, papular urticaria, dysplastic naevi, inflammatory dermatoses, arterio-venous malformations, angiodermatitis or dermatofibromas and therefore erroneously missed[15-17]. The insistence on routine tissue biopsy of every suspicious lesion and enlarged lymph nodes in children will increase the chances of identification of childhood KS in our environment.

The lower limbs were the most commonly affected regions of the body, being involved in most of the patients reviewed. This observation is in consonance with previous reports on KS irrespective of the epidemiological type of the disease[1,2,8-10]. The reason for this site predilection is largely unknown. On the other hand, the HIV/AIDS-associated KS is reportedly notorious for wide spread involvement of the other body regions as well[1,2]. There is no documentation of the visceral disease in this audit unlike in other reports[18,19]. It had been suggested that visceral organ affectation is terminal and constitutes a part of extensive dissemination of the disease[8]. The availability of affordable sophisticated diagnostic facilities such as CT scan and fibreoptic endoscopes, which are still scarce in most centers in the West-African sub region, would invariably improve the identification of most visceral cases of KS.

Multiple nodules as well as limb swelling/induration constituted the presenting symptoms in over 90% of the cases in this series. This observation agrees with those of others[8, 9,19]. The finding of nodular lesions and/or indurated limb swelling in any adult male in this environment must therefore be considered to be KS until histologically evaluated.

Fewer (n = 11, 40.7%) cases of the endemic (HIV-negative) African variant of KS were seen in the current review. This contrasts with studies in southeastern Nigeria which reported a high endemicity for the adult African KS[8]. With the upsurge in the HIV/AIDS scourge and increased urbanization, regions of the country previously with low prevalence for KS may witness more cases of the epidemic form of this disease as was recently reported in Brazil [2].

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