

Kaposi's Sarcoma of Lymph Node(s) in Western Kenya

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Abstract: From 1979 to 1986, 19 cases of Kaposi's sarcoma (KS) of lymph node(s) were detected in western Kenya (Western, Nyanza and Rift Valley Provinces). The male to female ratio was 3.7 : 1. Thirteen out of 19 cases were children. Seven out of 13 cases in children showed clinically generalized lymphadenopathy without skin lesion. Three out of four cases in adults showed the involvement of a solitary lymph node. Ethnically and geographically the highest incidence of the disease in children occurred in the Luo, inhabitants of Nyana Province and that in adults occurred in the Luhya, inhabitants of Western Province. These findings suggest that there are some differences of oncogenicity on KS of lymph node(s) between children and adults. Recently several reports of the aggressive KS which related to Human Immunodeficiency Virus/Human T-cell Lymphotropic Virus Type III (HIV/HTLV-III) infection have been reported from Zambia and Uganda. Although one out of four cases in adults showed an aggressive form of KS with generalized lymphadenopathy and disseminated multiple cutaneous nodules, there was no clear evidence that the aggressive KS is increasing in number in recent years in western Kenya.

Key words: Kaposi's Sarcoma, Lymph Node, Western Kenya, Aggressive Form

INTRODUCTION

It is recognized that KS is more common in the African continent than in any other parts of the world (Oettle, 1962; Maclean, 1963). KS has been classified clinically into four types; Nodular type, Florid type, Infiltrative type and Lymphadenopathic type (Taylor *et al.*, 1971). Although Florid and Infiltrative types of KS often show an aggressive clinical course, many patients survive for several years before death from

disseminated organ involvement (Taylor *et al.*, 1971; Templeton, 1972; Bayley, 1984; Serwadda *et al.*, 1986). Lymphadenopathic type is most frequently seen in young children and shows a generalized lymph node involvement without skin lesion and prognosis is poor (Oettle, 1962; Jelliffe *et al.*, 1962; Slavin *et al.*, 1970; Taylor *et al.*, 1971). Recently several cases of the aggressive KS in adults which showed a generalized lymph node involvement with or without skin lesion have been reported from Zambia and Uganda and this type of KS is increasing in number (Bayley, 1984; Bayley *et al.*, 1985; Serwadda *et al.*, 1986). The aim of this study is to report the geographical and ethnical characteristics of KS of Lymph node(s) and the aggressive KS in western Kenya.

MATERIALS AND METHODS

From 1979 to 1986, we collected 124 specimens of KS in Rift Valley Provincial General Hospital in Nakuru and Nyanza Provincial General Hospital in Kisumu, Kenya. Most of the surgical pathological specimens in western Kenya (Western, Nyanza and Rift Valley Provinces) have been sent to the Histology Departments of the two Hospitals. 124 out of 25,343 surgical specimens were histologically diagnosed as KS. Nineteen out of 124 cases of KS showed a lymph node(s) involvement. Clinical informations of the patients, such as the age, sex, resident place, site of lesion and clinical course, were recorded as accurately as possible.

Histological examination were performed using HE, periodic acid Schiff (PAS), reticulum, elastic van Gieson and Azan Mallory stains.

RESULTS

Table 1 summarizes 19 cases of KS of lymph node(s) in western Kenya between 1979 and 1986.

1. Sex and age distribution.

The male to female ratio of 19 cases of the disease was 3.7 : 1. 13 out of 19 cases of the disease were children. The male to female ratio in children was 5.5 : 1. The youngest patient was one year old boy. Four cases were adults and the oldest patient was 48 years old female. The male to female ratio in adults was 3 : 1.

2. Ethnical and geographical distribution.

Ethnically, eight out of 19 cases of the disease appeared in the Luo and Luhya, inhabitants of Nyanza and Western Province, respectively. Eight out of 13 cases in children appeared in the Luo, followed by four cases in the Luhya. Three out of four cases in adults appeared in the Luhya, followed by one case in the Kalenjin, inhabitants of Rift Valley Province. Geographically, nine out of 19 cases were from Nyanza Province around Lake Victoria and eight cases were from Western Province which borders on Uganda. Nine out of 13 cases in children were from Nyanza Province, followed by four cases from Western Province. Three out of four cases in adults were from western Province, followed by one case from Rift Valley Province.

Table 1. Nineteen cases of KS of lymph node(s) (1979–1986)

Case	Age	Sex	Site of lesion	Ethnic group	District	Province
1	1y9m	M	Generalized lymph nodes	Luhya	Kakamega	Western
2	1	M	Inguinal lymph node	Luhya	Kakamega	Western
3	7	M	Generalized lymph nodes	Luo	Kakamega	Western
4	Unknown	F	Unknown lymph node	Luhya	Kakamega	Western
5	5	F	Generalized lymph nodes	Luo	South Nyanza	Nyanza
6	12	M	Cervical lymph node	Luo	Kisumu	Nyanza
7	8	M	Elbow lymph node	Kisii	Kisii	Nyanza
8	Adult	M	Unknown lymph node	Kalenjin	Kericho	Rift Valley
9	1y6m	M	Generalized lymph nodes	Luo	South Nyanza	Nyanza
10	Child	M	Generalized lymph nodes	Luo	Kisumu	Nyanza
11	Unknown	M	Unknown lymph node	Kikuyu	Nakuru	Rift Valley
12	1y9m	M	Generalized lymph nodes	Luo	Siaya	Nyanza
13	Adult	M	Generalized lymph nodes and multiple nodules, whole body	Luhya	Busia	Western
14	48	F	Unknown lymph node	Luhya	Kakamega	Western
15	10	F	Unknown lymph node	Luhya	Kakamega	Western
16	2y6m	M	Unknown lymph node	Luhya	Kisumu	Nyanza
17	1y8m	M	Generalized lymph nodes	Luo	Kisumu	Nyanza
18	6	M	Unknown lymph node	Luo	Kisumu	Nyanza
19	23	M	Cervical lymph node	Luhya	Bungoma	Western

Table 2. Nineteen cases of KS of lymph node (s) (1979–1986)

	1979	1980	1981	1982	1983	1984	1985	1986
Child	1	0	4	2	1	1	3	1
Adult	0	0	0	1	0	1	2*	0
Unknown	0	0	1	0	1	0	0	0
Total	0	0	5	3	2	2	5	1

* One of the two adult cases showed the aggressive form of KS

3. Clinical appearances and site of lesion(s).

Seven out of 13 cases of the disease in children showed clinically a generalized lymph node involvement without any skin lesion. Six children and three adults showed a solitary lymph node involvement without skin lesion. One case in adults showed an aggressive form of KS with a generalized lymph node involvement and multiple cutaneous nodules on the whole body. Table 2 describes the number of KS of lymph node(s) in western Kenya between 1979 and 1986. Although one adult case in 1985 showed the aggressive form of KS, there was no clear evidence that this type of KS is increasing in number in recent years in western Kenya.

DISCUSSION

The high incidence of endemic KS in the African continent is seen among the fifth and sixth decade of life (Oettle, 1962; Slavin *et al.*, 1969; D'Oliveira and Torres, 1972; Kungu and Gatei, 1981). Although the most common site of primary lesion in adults is the foot, followed by the leg, hand and arm, KS in children is predominantly primary of lymph node(s) origin. Endemic KS, especially in adults, usually progresses slowly, sometimes with spontaneous regression. However, lymphadenopathic KS in children shows the aggressive clinical course with a generalized lesions often involving the visceral organs. In adult cases, the lymph node(s) involvement of KS is uncommon. However, recently several cases of the aggressive KS in adults which showed a generalized lymph node involvement with or without skin lesion, similar to KS in African children and acquired immunodeficiency syndrome (AIDS) patients have been reported from Zambia and Uganda (Bayley, 1984; Bayley *et al.*, 1985; Serwadda *et al.*, 1986). The major distinguishing features of the aggressive KS are: Disseminated disease usually involving lymph nodes with or without skin lesions in a younger population, poor prognosis and evidence of infection with HIV/HTLV-III. In our series between 1979 and 1986 in western Kenya (Western, Nyanza and Rift Valley Provinces), 19 out of 124 cases (15%) of KS had the lymph node(s) involvement with or without skin lesions. The patients of KS of lymph node(s) in this study were mainly (13 out of 19 cases) children under 12 years old. Among KS in children seven cases had a generalized lymph node involvement. However, no manifestation of skin involvement as seen in the cases of epidemic KS was observed. In adult, three out of four cases had a solitary lesion of the lymph node. KS of lymph node(s) were male preponderant more than three times in both children and adults. One adult case of KS in this study was clinically aggressive showing a generalized lymph node involvement with multiple cutaneous lesions and similar to the recently reported cases from Zambia and Uganda (Bayley, 1984; Bayley *et al.*, 1985; Serwadda *et al.*, 1986). Although serum tests for HIV/HTLV-III have not been performed, a possibility exists that the case was the epidemic type of KS. This case was only one among 124 cases of KS in western Kenya during the eight year period between 1979 and 1986 which showed almost same clinical course as aggressive cases were reported from Zambia and Uganda. But it is not clear that the aggressive KS is increasing in number in western Kenya. Furthermore, ethnic groups of the patients of lymph node(s) type of KS were the Luo and Luhya, who were main inhabitants of the tropical savannah, in hot and humid area in western Kenya. There are obvious ethnical and geographical differences of distribution in adult and child type KS of lymph node(s). These findings suggest that there are some differences of oncogenicity on KS of lymph node(s) between adults and children. And KS of lymph node(s) is an endemic disease in western Kenya and natural environment has a significant role as etiological cofactors as seen in cutaneous type of KS in the African continent.

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ケニア西部におけるリンパ節型カポシ肉腫

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アフリカにおける地方病型カポシ肉腫の成人型は一般的にその病状経過は穏やかであるが、最近、ザンビアおよびウガンダから、小児リンパ節型カポシ肉腫あるいは後天性免疫不全症候

群 (AIDS) に合併するカボシ肉腫に臨床的に類似した成人劇症型が数例報告され、それらは増加傾向を示していると言われている。これらの症例は一般的な成人型とは異なり皮膚症状に乏しくリンパ節浸潤を特徴とし急速な症状悪化を示す。また症例の多くでは Human Immunodeficiency Virus/Human T-cell Lymphotropic Virus Type III (HIV/HTLV-III) の感染が確認されている。1979年から1986年の8年間に我々はウガンダに隣接した西ケニア (ウエストン, ニャンザ, リフトバレー州) においてリンパ節浸潤を示す19例のカボシ肉腫を得、その中に HIV/HTLV-III 感染は確認できなかったが、1例の成人劇症型を見出した。しかしながら増加傾向などは見出しえなかった。

また、西ケニアにおいて小児型と成人型のリンパ節型カボシ肉腫の分布には明瞭な地域差および部族差が認められるとともに臨床像もかなり異なり、これらの事実は両者のカボシ肉腫発生病序にはなんらかの相違があることを示唆している。

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