A HISTOPATHOLOGICAL PATTERN OF VASCULAR TUMOURS IN NORTH EASTERN, NIGERIA.

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SUMMARY

Aims: To review the histopathological pattern, age, sex, site and behaviour of the vascular tumours in North Eastern, Nigeria.

Methods: This is a retrospective study of vascular tumours diagnosed between January 1992 and December 2001 in the Histopathology Department of University of Maiduguri Teaching Hospital.

Results: A total of 139 cases of vascular tumours were histologically diagnosed. The age ranged between 2 months and 60 years with 105 (75.5%) adults and 34 (24.5%) children. The mean age for adults was 31.2 years and children were 7.3 years. There were 88 (63.3%) males and 51 (36.7%) females giving a male, female ratio of 1.7:1. Benign and malignant vascular tumours accounted for 58% and 42% respectively. The commonest tumour was hemangioma, which accounted for 50.3% of all tumours. Kaposi sarcoma is the predominant malignant lesion accounting for 55(39.6%); Lymphangioma 11(8.0%); Glomus tumour 2(1.4%) and Haemangioendothelioma 1(0.7%). The commonest site of all vascular tumours is the head and neck (30.9%). The leg and foot is the commonest site of Kaposi sarcoma (43.7%). Out of the 55 cases of kaposi sarcoma, 34 of the patients were screened for HIV infection and all were sero-positive.

Conclusion: Vascular tumours are not uncommon and affect all age groups. Kaposi sarcoma associated with HIV infection in our environment needs to be emphasized.

Key words: Vascular tumours; Haemangioma; Kaposi sarcoma; Histopathological pattern.

INTRODUCTION

Vascular tumours represent one of the commonest groups of tumours to arise in skin or soft tissue. Majority of these lesions are benign and it is frequently uncertain whether they represent true neoplasms, congenital malformation or hamartoma. Traditionally, this group encompasses lesions derived from blood vascular endothelium, lymphatic endothelium and specialized perivascular cells (glomus cells and pericytes).[1] These tumours origin range from benign forms (haemangiomas, Lymphangiomas and glomus tumour) to borderline forms of unpredictable behaviour (haemangiopericytoma and Haemangio-endothelioma); to malignant forms (angiosarcoma and Kaposi's sarcoma).[2] This paper therefore aims at reviewing the histopathological pattern, age, sex, site and behavior of vascular tumours in our tertiary institution. It will also form a baseline data for further studies in this region.

MATERIALS AND METHODS

A retrospective study of 139 cases of vascular tumours histologically diagnosed between January 1992 and December 2001 in the Histopathology department of the University of Maiduguri Teaching Hospital (UMTH) was carried out. The specimens received were fixed in 10% Formalin and processed in paraffin embedded wax. Sections were made and stained with routine Haematoxyline and Eosin (H&E). The slides and the request forms were retrieved and reviewed. The data were extracted from the request forms, which include: age, sex, anatomical site and the histopathological diagnosis. The data were analysed by simple statistical tables. The tumours are classified based on there histological types.

RESULTS

AGE AND SEX DISTRIBUTION

The age distribution of vascular tumours shows 105 (75.5%) cases were adults while children less than 16 years of age constitute 34(24.5%); with adult, children ratio of 3.2:1. Sixteen of the cases were children within 5- years of age. The sex distribution showed 88(63.3%) males and 51(36.7%) females giving a male: female ratio of 1.7:1There was equal sex ratio in childhood but in adults, the sex ratio was almost doubled with male preponderance. Benign and malignant vascular lesions accounted for 58% and 42% respectively (Table 1).

ANATOMICAL SITE DISTRIBUTION

Fig I. Shows the head and neck as the commonest site involved and accounted for 43(30.9%) cases. Thirty-nine (28.1%) cases involved the lower limb; 26 (18.7%) cases involved the upper limb; 7(5.0%)cases involved the trunk; 6(4.3%)cases involved the perineum; 5 and 1 cases involved the lymph nodes and liver respectively. There were 12 (8.6%) cases whose sites were not specified.

Table 2. Shows the head and neck distribution of vascular tumours with the neck as the commonest site involved and accounted for 15 (34.9%) cases. The facial areas accounted for 7; there are 6 cases each from the scalp and lips; 2 cases each from the tongue, gingival, ears, nose and one case from the pharynx.

Fig II. Shows the site of distribution of Kaposi's sarcoma. The leg and foot were the commonest sites and accounted for 47.3% of all cases Kaposi's sarcoma followed by upper limbs. Head and neck, lymph nodes, trunk, tongue and gingiva in the following order of frequency. However, the sites of 6 cases were not specified.

HISTOLOGICAL TYPES

Table 3 shows 139 cases were diagnosed as vascular tumours. Haemangiomas were the commonest lesions representing 70 (50.3%) cases of all the tumours and granuloma pyogenicum (33 cases) was the commonest variant. There were 55 cases of Kaposis sarcoma. Lymphangioma accounted for 11 cases [cystic hygroma (10 cases) and capillary (one case)] and 2 cases of glomangioma (glomus tumour). A case of Haemangioendothelioma was also documented in the neck of a 9-year old boy.

Table-1: Age and sex distribution of vascular tumours

Age group (YRS)	Male			Female			Total (%)
Childhood	Benign	Malignant	Subtotal	Benign	Malignant	Subtotal	
0-5	6	0	6	8	2	10	16
6-10	6	1	7	2	0	2	9
11-15	4	0	4	5	0	5	9
Subtotal	16	1	17	15	2	17	34(24.5%)
Adult							
>15	31	40	71	19	15	34	105(75.5%)
>15							
Total	47	41	**88**	34	17	**51**	**139**

Table 2:HEAD AND NECK DISTRIBUCTION OF VASCULAR LESIONS

SITE	FREQUENCY	PERCENT
Facial area	7	16.3
Scalp	6	13.9
Lips	6	13.9
Tongue	2	4.6
Gingiva	2	4.6
Ears	2	4.6
Nose	2	4.6
Pharynx	1	2.3
Neck	15	34.9
TOTAL	43	100

Table.3: HISTOLOGICAL TYPES OF VASCULAR TUMOURS

Histological type	No of cases	Total	%
Haemangioma-Capillary	30		
-Cavenous	7	**70**	50.3
-Granuloma pyogenicum	33		
Lymphangioma-Capillary	1	**11**	**8.0**
-Cystic Hygroma	10		
Glomus Tumour	2	**2**	1.4
Kaposi's sarcoma	55	**55**	39.6
Haemangioendothelioma	1	**1**	0.7
Total	**139**	**139**	**100**

DISCUSSION

This study presents the histopathological pattern of vascular tumours in our tertiary institution. Vascular tumours affected all age groups from two months to 60 years in this study. The tumours were predominantly seen in adults (75.5%) although, childhood tumours accounted for 24.5%. These findings agree with the studies in Zaria.[3,4] Vascular tumours especially Haemangiomas were commonly seen in childhood and most of them were conservatively managed and only 19% of the cases had surgical excision as documented by Bode et al in Lagos.[5] In Ibadan, Ofodile et al documented 52% of patients with haemangiomas who were treated by observation only and most of the lesions regresses spontaneously[6].

The commonest subtype of haemangioma was granuloma pyogenicum, which accounted for 47.1% of all cases. It appears as an elevated, dark red lesion that may or may not be ulcerated and may regress completely or heal as a residual fibrous mass. An identical lesion occurring during pregnancy has been referred to as granuloma gravidarum or pregnancy tumour[7]. Six cases of granuloma gravidarum were recorded in our study.

Thirty- one cases (91.2%) of the childhood vascular tumours were benign and only 3 (8.8%) cases were malignant; in contrast to 55 malignant and 50 benign cases in adults. The high incidence of malignancy in adults is due to Kaposi's sarcoma, which is associated with HIV infection in almost all the patients screened in this study. There were 55 (40 males and 15 females) cases of Kaposi's sarcoma out of which only 34 cases (25 males and 9 females) were screened for HIV infections and all were sero-positive. Kaposi's sarcoma is the predominant malignant lesion in this study accounting for 97.8%. One of the patients with Kaposi sarcoma was a 2-year-old girl, who presented with cervical lymphadenopathy and was HIV positive. However, this is the commonest presentation of Kaposi'sarcoma among Ugandan Children.[8] In Zaria, Ahmed et al documented similar findings of AIDS associated Kaposi's sarcoma (AAKS) in their studies.[9]Similarly, Rafindadi et al in Zaria documented 77.8% of cases with AIDS associated Kaposi's sarcoma (AAKS)[3] . Whitby et al in United Kingdom also reported 46 patients with AAKS out of the 70 cases with AIDS [10]. It will be interesting to find out the incidence of AAKS in men homosexuals since it is one of the major routes of transmission of HIV infection, although it has been seen in heterosexual drug users[11]. The cause of Kaposi's sarcoma and the cell of origin is still uncertain. Although the role of HIV and Human herpesvirus type 8 were established[12] .

The single case of haemangioendothelioma in this study was in a 9-year old boy who presented with right-sided neck swelling. This lesion is rare, although Rafindadi recorded 3 cases in his study in Zaria[4].This lesion is a distinctive low grade variant of angiosarcoma usually

occurring in the distal extremities of young individuals, sometimes associated with hyperkeratotic changes in the overlying epidermis[13].

Glomus tumour is a biologically benign lesion, which arises from the modified smooth muscle cells of the glomus body, a specialized arteriovenous anastomosis that is involved in thermoregulation and is commonly located in the distal portion of the digits, especially under the fingernails.[14] However, in our study there were two cases of Glomus tumour, one of which was located in the neck of a 41-year-old man and the other one was on the finger of a 51-year-old man. This finding agreed with the common site of presentation. It is a rare disease and no case was reported in Zaria[3,8].

Vascular tumours are not uncommon and affect all age groups. Kaposi sarcoma is associated with HIV infection in our environment and needs to be emphasized.

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