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RETROSPECTIVE STUDY OF REACTIVE HYPERPLASIA IN LYMPH NODES

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Abstract: **This is a retrospective study of 85 cases of reactive lymphoid hyperplasia, reviewed with Professor Wilson I. B. Onuigbo, from 1972-2002. The clinicodemographic data retrieved included age, sex, location of lesions, duration and sizes of lesions. The mean age of the patients was 30.5 years and percentages by sex are 55.4 and 44.6 respectively. A total of 42.7% of the lesions are located in the groin, 19.51% in the axilla and 19.51% multiple lymph nodes, 12.20% in the neck and 6.10% mesentery. Fever constituted 24.44% of the clinical features, followed by pains 21.11%;weight loss 12.22% and the rest follows in decreasing order. The sizes of the lesions in the widest diameter were as follows: 41% for 2cm, 20.3% for 3cmand 12.7% for 1cm. 52.73% of lesions lasted for one to six months. Using chi-square, there is no significant difference in age of both sexes (P value >0.05); Outcome of fever (P value > 0.05) and that of the sizes of lesions (P value >0.05). There is predominance of lesions In the inguinal region (P value < 0.05) and one to six months lesions(P value 0.05).Thus this study shows equal affliction to both sexes, predominantly, at the inguinal groin, with no specific predominant symptoms or size of lesion, as cases are not often acute.**

Keywords: **lymphoreticular system, lymph node, hyperplasia, clinicodemographic.**

1. INTRODUCTION

Organs and tissues of the lymphoreticular system are primarily involved in the interaction between lymphocytic and monocytic-macrophage lineage in the generation of immune response [1], [2]. Up to 600 nodes, are scattered at various regions of the body, not including spleen, tonsils, adenoid and peyer's patches which are parts of lymphoid tissue [3], [4]. They are strategically positioned at various parts of the human body to surveil, process and eliminate potentially harmful antigens [5], [6], [7], [8]. Lymph node, an integral part of the human lymphoreticular system – which adequately deals with foreign substances [9], [10], also plays vital role in cancer Metastases [11] , [12]. Lymph nodes tend to occur in groups particularly at areas such as the neck, axilla, mediastinum and groin [4], [13], [14].

In response to invading organisms, chemicals, environmental pollutants and even some drugs, lymph node at the related prime position is activated and consequently gets enlarged in a bid to exclude antigens from intracellular fluid [1],[3],[9]. Benign and irreversible enlargement of the lymphoid tissue consequent upon antigenic stimulation is regarded as reactive lymphoid hyperplasia [2], [7]. Reactive lymphoid hyperplasia is classified into four groups, based on the part of the lymph node affected: follicular/cortical, paracortical, sinus and diffuse reactive hyperplasia [9]. Reactive lymphoid hyperplasia is more common among younger people [14].

According to Adelusola et al., reactive lymphoid hyperplasia is the significant cause of lymphadenopathy in children with yet developing immune system [15]. 40% of lymphadenopathy has been attributed to reactive lymphoid hyperplasia [4], [16]. Therefore the aim of this work is to high light the pattern of reactive lymphoid hyperplasia among the Igbos of Eastern Nigeria.

2. MATERIALS AND METHODS

The study was carried out with 85 cases of lymphoid hyperplasia, reviewed with Professor Wilson.I.B.Onuigbo, from 1972-2002. Relevant clinicodemographic information of the patients such as laboratory number, age, sex, location of biopsy, symptoms and durations were obtained from the patient's request form. The results obtained were subjected to statistical analysis.

3. RESULT

Eighty five patients diagnosed as having reactive lymphoid hyperplasia were studied. 55.4% were males, while 44.6% where females, giving an overall male to female ratio 1.24:1, and the mean age of patients were 30.5 years as in Table I.

The sites of the biopsies were indicated in all cases. Lymph nodes within the groin are the most common and constitute 42.68%; followed by those of the axillary group 19.51%. Among the entire lymph node biopsies, multiple lymph nodes are common in 19.51% cases, while the least biopsied lymph nodes were those of the mesentery 6.1%. (Table II)

The signs and symptoms were specified in 61.2% of the series. Fever was the most common clinical feature 24.44%, followed by pains 21.11%. Pruritus, loss of appetite, epistaxis and haemoptysis featured least, 1.1% respectively in this work. (Table III). Of the 79 cases in which the sizes of the lesions were indicated, the predominant size of lesion in the longest diameter was 2cm, 41%, followed by 3cm, 20.5%. (Table IV).

Durations of the lesions were documented in 55 of the entire cases and 52.6% of the lesions lasted from one to six months, while 42.1% lasted for less than a month. (Table V).

TABLE I: AGE AND SEX DISTRIBUTION

Group	Female	Male	Total	Percentage
≤ 20	10	20	30	35.29
21-30	10	13	23	27.06
31-40	5	2	7	8.24
41-50	5	4	9	10.59
51-60	5	5	10	11.76
61-70	2		2	2.35
71-80	1	2	3	3.53
>80		1	1	1.18
Total	38	47	85	

$X^2 = 8.205$, P value = 0.315 (>0.05)

P value = 0.315

TABLE II: LYMPH NODE GROUP

Location	**Total**	**Percentage**
Groin	35	42.68
Axilla	16	19.51
Multiple lymph node	16	19.51
Neck	10	12.20
Mesentery	5	6.10

$X^2 = 11.285$

P value = 0.001 (<0.05)

TABLE III: CLINCAL FEATURES OF REACTIVE LYMPHOID HYPERPLASIA

Presentation	**Number of patients**	**Percentage**
Fever	22	24.44
Pain	19	21.11
Weight loss	11	12.22
Splenomegaly	8	8.89
Hepatomegaly	5	5.56

Pallor	5	5.56
Ascites	3	3.33
Vomiting	3	3.33
Weakness	2	2.22
Cough	2	2.22
Dyspnea	2	2.22
Diarrhea	2	2.22
Loss of appetite	2	2.22
Epistaxis	1	1.11
Pruritus	1	1.11
Haemoptysis	1	1.11
Constipation	1	1.11

X^2 =21.4

P value = 0.41 (<0.05)

TABLE IV: SIZES OF LESIONS

SIZE(cm)	NUMBER	PERCENTAGE
1	10	12.7
2	32	41
3	16	20.3
4	9	11.4
5	5	6.2
6	3	3.8
7	1	1.3
8		
9	1	1.3
10	1	0.01
	78	

X^2 = 24.72

P Value = 0.24 (>0.05)

TABLE V: DURATION OF LESIONS

Duration	**Number**	**Percentage**
<1	23	41.82
1-6	29	52.73
>6	3	5.45
Total	55	100

X^2 = 20.21

P Value = 0.00 (<0.05)

4. DISCUSSION

Although reactive lymphoid hyperplasia is a well-known entity, this study excludes cases outside the lymph nodes. In this study, the mean age of the patients is 30.5 and the majority were males (55%), though statistically insignificant (P value >0.05). This is consistent with the work done by Ahmad in 1992, indicating that both sexes are equitably disposed to the aetiologic factors [17]. The study also affirms reactive lymphoid hyperplasia as a common benign condition of younger people, in line with the work by Kunitz and Francisco [18].

Groin lymph nodes were involved most often in this work (p<0.05). This is consistent with the experience of Lee and his colleagues [19]. Strategic location of these groups of lymph nodes closer to the lower limbs and urinogenital system which are vulnerable areas, could account for this predominance. Next was axillary group of lymph nodes, before multiple lymph nodes. This was at variance with the study done by Duberneck in 1983; in which cervical lymph nodes took the lead [2].The most common clinical sign in this study was fever. This compares well with the work done by Lake and Oski in 1978[21]; but statistically it is not significant (P value >0.05). Pain is often associated with lymphodenopathy of infectious origin [17] and it was next, in this study.

The statistical study indicates that none of the symptoms is predominant. Other major clinical features in the study are hepatomegaly, cough, loss of weight, splenomegaly, haemeptysis and pallor; this is consistent with previous related works [5], [7], [21]. In this work, 41% of the samples were 2cm in the widest diameter. Statistically, this is not significant (P Value >0.05). This fact is in line with the work of Suba, et al. in which it was held that lymph node or nodes of 1cm and above is diseased [4].

The lesions in the study lasted from 1 week to 72 months. More than half of the lesions (52.73%) lasted from one to six months. This is in consonance with the work done by Lake and Oski [21]. Analysis shows that the result is significant (P value =0.00). Considering the fact that acute conditions could occasion early presentation to the doctors, one may say that reactive lymphoid hyperplasia is not significantly acute.

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