

Bone Lymphoma in a Developing Community

Wilson IB Onuigbo*

Pathology Department, Medical Foundation and Clinic, Enugu, Nigeria

***Corresponding Author:** Wilson IB Onuigbo, Pathology Department, Medical Foundation and Clinic, Enugu, Nigeria.

Received: April 24, 2018; **Published:** June 29, 2018

Abstract

Lymphoma of the bone is rare. Now, single and many cases have been published from countries as far apart as Canada, China, France, India, Iran, Japan, Korea, Japan, Pakistan and USA. Therefore, Nigerian cases are deemed to be worthy of research, especially as Birmingham (UK) associates deduced that the establishment of a histopathology data pool facilitates epidemiological analysis. Since such a pool was established for the Igbo ethnic group with the author as the pioneer pathologist, the cases of bone lymphoma have been collected and are presented here and compared with previous reports worldwide.

Keywords: Bone; Lymphoma; Epidemiology; Nigeria

Introduction

A well-known fact is the rarity of bone lymphoma. Internet search revealed reports from countries as far apart as Canada [1], China [2,3], France [4], India [5,6], Iran [7], Japan [8-10], Korea [11], Pakistan [12] and USA [13-18]. Therefore, this paper draws attention to Nigeria, a developing country whose data ought to be noteworthy.

Case Report and Investigation

Birmingham (UK) authors postulated that the establishment of a histopathology data pool facilitates epidemiological analysis [19]. It so happened that such a pool was established in South Eastern Nigeria, at Enugu, to serve the Ibo/Igbo ethnic group [20]. Actually, I became the pioneer pathologist in 1970 and ensured that the medical practitioners filled Histology Request Forms properly. Moreover, as I kept my own copy of the Reports, analysis was relatively easy. Thus, for this paper, the Results may be tabulated.

Results

Age group	Male	Female	Total
< 10	7	4	11
11 - 20	8	4	12
21 - 30	3	1	4
31 - 40	2	1	3
41 - 50	2	1	3
51 - 60	1	-	1
61	2	1	3
Total	25	12	37

Table 1: Age and sex distribution.

The 3 youngest patients were each aged 3 years and the oldest was a 78-year-old man (mean 34 years). Patently, males preponderated as did young patients.

As many as 23 patients presented with a swelling. Six others had pain, while 3 suffered both swelling and pain. Three manifested pathological fracture while there was a lone case of paraparesis.

With reference to the sites of origin, the following were noted in order: maxilla, 10; mandible 6; skull, and femur, 4 each; finger, humerus, tibia, and ilium, 2 each, and trochanter, talus, and patella, 1 each. A single case had multiple lesions. Jaw was loosely specified once, while it was paraspinal in the remaining case.

Discussion

Some observations stand out from a worldwide point of view comparatively. One of them is that the proportion of males was higher than that of females [3,4,7,12]. The local proportion tallied with this.

In terms of the overall age itself, the median figure was placed at 45 years [3], 48 years [4], 41 years [7] and 47 years [8]. Clearly, my figure of 34 years is lower. This is because of the relatively large number of children. In the USA work on children [15], the mean age came to 11.6 years, but the age limit was not clear.

The site of presentation is interesting in its variability. The Iranian patients showed up to 71% involvement of long bones [7]. In Japan, the pelvis was the most frequently involved site in 54% [8]. The single case reported from that country involved the hip [9]. Concerning that country [10], the report was that "the bones most commonly involved were pelvis, femur or tibia, and spine." In Korea [11], the spine was the most prevalent site. In Pakistan [12], the order was femur (28.3%), hip bone (16.6%) and numerous (10%). There was a considerable scatter in a reported quoted from USA (13) thus: "femur (27%), pelvis (15%), tibia/fibula (13%), polyostotic (13%), humerus (12%), spine (9%) other (5%), mandible (2%), radius/ulna (1%), scapula (1%) and skull (1%). Apparently, the Nigerian pattern differed mostly in terms of the preponderating jaw affections.

Among 13 Canadian patients suffering from bone lymphoma [1], two had multiple bony sites. Indian work referred to WHO Classification which included polyostotic disease [5]. Only one local patient had such involvement.

Pathological fracture plays its own role [6,13]. Three patients, all males, exhibited fractured femur (twice) and humerus (once). This agrees with the known propensity of long bones to sustain fractures [9,12].

Paraspinal involvement matters. Spinal cord compression was noted in an Indian series [6], as well as in a Korean one [11]. In the local case, a 43-year-old man presented with back pain and weakness of both legs due to a paraspinal mass. When it was biopsied, the diagnosis was conclusive.

Conclusion

A well-known rarity is the lymphoma of bone. This article provides examples from several countries worldwide. Finally, 37 examples are presented from among the Igbo ethnic group which is domiciled in South Eastern Nigeria. These local cases are deemed to be worthy of documentation in respect of such variables as higher male proportion, site variation, pathological fracture, polyostotic disease and paraparesis.

Bibliography

1. Baar J., *et al.* "Primary non-Hodgkin's lymphoma of bone. A clinicopathologic study". *Cancer* 73.4 (1994): 1194-1199.
2. Zhou H-Y., *et al.* "Primary bone lymphoma: A case report and review of the literature". *Oncology Letters* 8.4 (2014): 1551-1556.

3. Zhang X., *et al.* "Clinical characterization and outcome of primary bone lymphoma: A retrospective study of 61 Chinese patients". *Scientific Reports* 6 (2016): 28834.
4. Brousse C., *et al.* "Primary lymphoma of bone: A prospective study of 28 cases". *Joint Bone Spine* 67.5 (2000): 446-451.
5. Jain A., *et al.* "Primary bone lymphoma: Clinical cases and review of literature". *Journal of Bone Oncology* 2.3 (2013): 132-136.
6. Singh T., *et al.* "Primary bone lymphoma: A report of two cases and review of the literature". *Journal of Cancer Research and Therapeutics* 6.3 (2010): 296-298.
7. Nasiri MRG., *et al.* "Primary bone lymphoma: A clinicopathological retrospective study of 28 patients in a single institution". *Journal of Research in Medical Sciences* 16.6 (2011): 814-820.
8. Maruyama D., *et al.* "Primary bone lymphoma: A new and detailed characterization of 28 patients in a single-institution study". *Japanese Journal of Clinical Oncology* 37.3 (2007): 216-223.
9. Zekry KM., *et al.* "Primary lymphoma of the pelvis: A case report". *Journal of Orthopaedic Case Reports* 7.6 (2017): 6-9.
10. Sekine I., *et al.* "Coxalgia as the initial symptom in Hodgkin's disease: A case report". *Japanese Journal of Clinical Oncology* 27.5 (1997): 353-356.
11. Choi JY., *et al.* "Primary lymphoma of bone: Survival and prognosis". *Korean Journal of Internal Medicine* 17.3 (2002): 191-197.
12. Qureshi A., *et al.* "Primary non-Hodgkin's lymphoma of bone: Experience of a decade". *Indian Journal of Pathology and Microbiology* 53.2 (2010): 267-270.
13. Bhagavathi S and Fu K. "Primary bone lymphoma". *Archives of Pathology and Laboratory Medicine* 113.11 (2009): 1868-1871.
14. Craig P and John S. "Adult lymphoblastic lymphoma". *Cancer Journal* 18.5 (2012): 432-438.
15. Glotzbecker MP, *et al.* "Primary non-Hodgkin's lymphoma of bone in children". *Journal of Bone and Joint Surgery. American Volume* 88.3 (2006): 583-594.
16. Kelly JL., *et al.* "Vitamin D and non-Hodgkin lymphoma risk in adults: A review". *Cancer Investigation* 27.9 (2009): 942-951.
17. Krishnan A., *et al.* "Primary bone lymphoma: Radiographic-MR imaging correlation". *Radiographic* 23.6 (2003): 1371-1383.
18. Wu H., *et al.* "Clinical characteristics and prognostic factors of bone lymphomas: Focus on the clinical significance of multifocal bone involvement by primary bone large B-cell lymphomas". *BMC Cancer* 14 (2014): 900.
19. Macartney JC., *et al.* "Use of a histopathology data pool for epidemiological analysis". *Journal of Clinical Pathology* 33.4 (1980): 351-353.
20. Basden GT. "Niger Ibos". London: Cass (1966).

Volume 9 Issue 7 July 2018

©All rights reserved by Wilson IB Onuigbo.