Bone Lymphoma in a Developing Community

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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

<table>
<thead>
<tr>
<th>Age group</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 10</td>
<td>7</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>11 - 20</td>
<td>8</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>21 - 30</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>31 - 40</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>41 - 50</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>51 - 60</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>61</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>12</td>
<td>37</td>
</tr>
</tbody>
</table>

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


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