Tumoral Calcinosis of the Breast in Nigeria: Case Report

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Abstract

Early recognition of tumoral calcinosis appeared in 1973. Four years later, I reported 7 cases occurring in Nigerians of the Igbo Ethnic group. Most of them manifested in the hip in consonance with the colloquial name of the 'hip stone' of Papua New Guinea. At that time, it was predicted that this pattern may change. Therefore, it is of interest to document two cases found in this community in female breasts a decade later.

Keywords: Tumoral calcinosis, Papua New Guinea, Nigeria, Breast

Introduction

When seven cases were published personally from Nigeria, it was found that most of them occurred around the hip [1]. This was in keeping with the colloquial name of the 'hip stone' of Papua New Guinea [2]. Incidentally, it was predicted then as follows: "Perhaps, the site of predilection of this intriguing disease will change with time." Accordingly, two local subsequent cases in which the female breast was affected are deemed worthy of publication.

It is noteworthy that Juan Rosan [3] concluded that this lesion is characterized by the formation of calcified masses in the periarticular soft tissues and that it has a genetic basis being associated with hyperphosphatemia. On his part, Spencer [4] emphasized lesions around the hips, buttocks and shoulder, adding that its pathogenesis is unknown but must be related to local factors as there is no disturbance of calcium metabolism. In view of these contrasting contexts, let the author provide what he saw in the breast after witnessing characteristic cases typical of the hip-stone lesions.

Clinical Records

1. UH#2643/86 AV. A 20-year-old woman went to the Mayo Hospital, Awgu, to complain to Dr Onuorah about the hard lump in her left breast. This was queried as cancer and was biopsied on 14th October, 1986. On receipt of the specimen at the University of Nigeria Teaching Hospital, Enugu, the resident, Dr C. C. Ugo, reported the lesion as a dark greyish fibrofatty tissue whose cut section exhibited partly whitish and partly yellowish areas with gritty portions. On microscopy, I found fibrosclerosis associated with calcified material separated into cavities by fibrous tissue typically. Tumoral calcinosis was accordingly diagnosed as in the previous series.

2. UH#3306/90 NJ. A 65-year-old woman attended the Almond Hospital, Enugu, with painful lump in the left breast. The clinician, Dr Madike, queried cancer and biopsied her on 22nd November, 1990. On receipt of the specimen, my resident, Dr. C. N. Ezidiegwu, described it as two irregular hard grey firm fibrofatty masses whose section showed pale chalky friable areas. My histological report was of firm surrounding fibrous tissue which is the seat of calcification in tumour-like formation in benign order. It was therefore diagnosed equally as tumoral calcinosis (Figure 1).

Discussion

These cases are the only ones that I encountered at the Reference Laboratory serving a large Nigerian Ethnic Group, the Iboos or Igbos [5], during a 30-year-period. For comparison, the period witnessed as many as 530 cases of fibroadenoma [6]. Interestingly, no case of tumoral calcinosis was reported in a recent Nigerian series of...
benign breast masses [7]. Nor was any found in the exhaustive review of Guray and Schin [8] as well as in a Saudi Arabian series [9]. Of the 56 cases reported from Malawi [10], none was of breast origin. The report [11] from London was of bilateral symmetrical disease; my cases were both unilaterally disposed. Concerning another report [12], seven siblings suffering from hyperphosphataemia suffered from tumoral calcinosis; neither of my cases disclosed occurrence in siblings.

Of some interest was the observation that, in 4 out of 56 cases, foreign pigment was in close proximity to the tumoral lesion; this led to the speculation “that the foreign material in some cases was in close proximity to the tumoral lesion; my cases disclosed occurrence in siblings.

Incidentally, during this period, my series on the breast were as diverse as on onchocerciasis [15], self-examination [16], carcinomasarcoma [17], epidemiology [18], health education [19], history [20,21], squamous carcinoma [22], epidermoid cyst [23], ratio of medullary carcinoma and invasive ductal carcinoma [24], abscess [25], and clear cell carcinoma [26].

Of the theories of causation, one is that of the “pressure factor.” As Veress, Malik and El Hassan [12] of Sudan put it, “The anatomical localization of the lesions is related to areas of the body which usually come into contact with the ground during sleeping and might easily be exposed to trauma.” In this context, the female breast would qualify if the individual tends to sleep in the prone position. Accordingly, the crucial question of their sleeping position should be put to females presenting with breast lumps worldwide.

In conclusion, there is a variety of views in the more recent papers. Thus, from Egypt, a review stated that the lesion “has been a controversial clinico-pathological entity” [27]. In India, biphosphonate therapy was found to be associated with lesion resolution [28]. The Japanese input was characterization “by the presence of calcified masses in the juxta-articular regions of the extremities” [29]. Indeed, from Brazil, it was claimed to be associated with systemic sclerosis [30].

References


