INJURIES FROM PALM TREE THORN SIMULATING TUMORAL OR PSEUDOTUMORAL BONE LESIONS

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Three cases of bone changes caused by foreign bodies that appeared to be tumoral lesions or pseudotumors, were observed in young male patients who presented with pain, localized inflammation, and radiographic and bone scan findings suggestive of tumoral or pseudotumoral lesions. Accurate diagnosis was made at surgery when the foreign body was retrieved. Following removal of the foreign body, postoperative recovery was satisfactory. The common causative agent in all these cases was a palm tree thorn.

Keywords : foreign body ; palm tree thorn ; pseudotumoral.
Mots-clés : corps étranger ; épine de palmier ; pseudotumeur.

INTRODUCTION

When a foreign body comes into contact with bone tissue it usually induces a local reaction which results in structural changes detectable on xray. The radiological findings may however suggest various pathologies. The cases reported here were referred with a suspected diagnosis of a tumoral or pseudotumoral lesion.

There are few publications describing lesions provoked by a vegetable thorn (3, 4, 6, 8, 9), and only two cases with lesions caused by a palm thorn have been reported (1, 4). The object of this study is to draw attention to the possibility of this unusual etiology when evaluating similar lesions.

CASE 1

A 25-year-old man who had suffered direct trauma to the right leg was diagnosed as having post-traumatic osteitis and was treated with NSAID's. One month later the pain persisted, and plain xrays revealed an osteolytic image on the posterolateral aspect of the tibia ; he was referred to the hospital to exclude a neoplastic process.

Technetium bone scan (fig. 1) showed increased uptake in the middle third of the right tibia. CT-scan (fig. 2) showed an osteolytic lesion without any periosteal reaction or newly formed bone, with a denser portion, suggestive of an osteomyelitic sequestrum, or an osteoid osteoma . The laboratory tests included sedimentation rate, hemogram, antinuclear antibodies, complement level, and immunoglobulin quantitative analyses, and were found to be normal.

Surgical intervention revealed a 3-cm long thorn which was removed (fig. 3). The pathological diagnosis was nonspecific osteomyelitis, revealing the presence of epithelioid cells, giant cells and granulomas containing lymphocytes.

The patient subsequently remembered having pricked himself on the top of his foot about a year previously.

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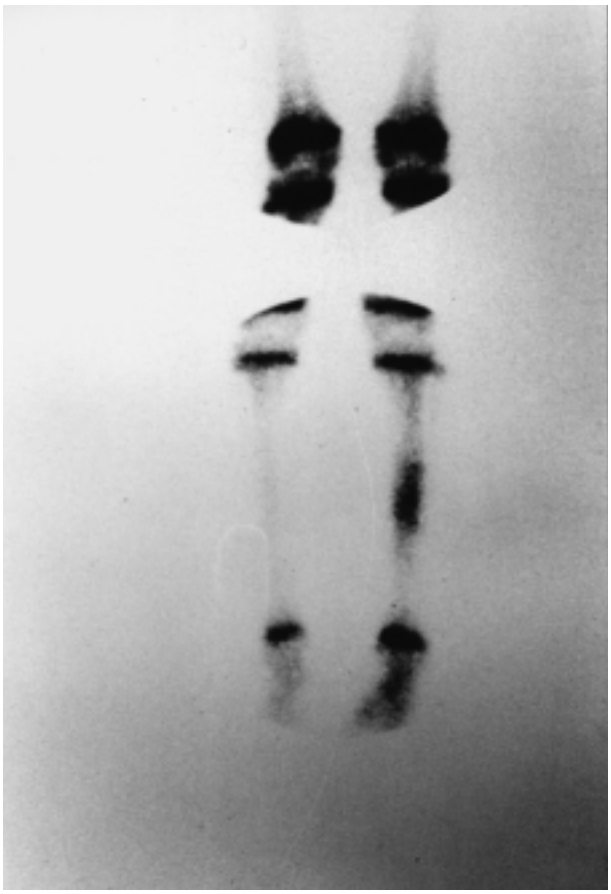

Fig. 1. — Increased uptake on bone scan (case 1)

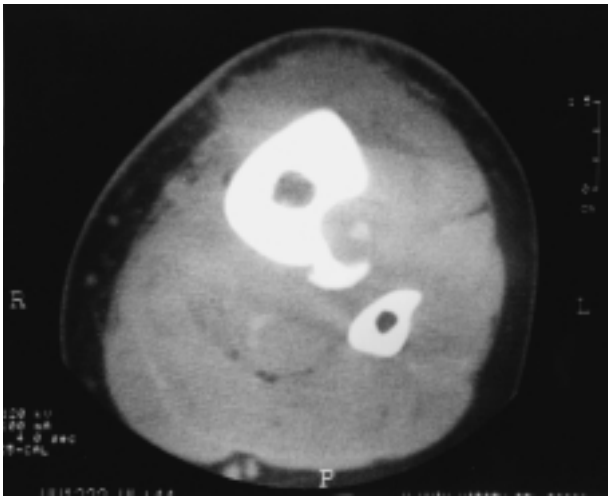

Fig. 2. — CT-scan of the same lesion.

Fig. 3. — Surgical removal of palm tree thorn (case 1)

CASE 2

A 15-year-old male presented to the emergency room complaining of pain and inflammation on the dorsum of his right hand, of several days duration. Simple xray (fig. 4) revealed an osteolytic lesion on the fourth metacarpal diaphysis. Bone scan demonstrated an area of increased uptake. Biopsy revealed a 2-cm palm thorn. The pathological report of a bone specimen retrieved indicated non-specific chronic osteomyelitis.

The patient subsequently remembered that he had pricked one of his fingers six months previously.

CASE 3

A 23-year-old male presented with pain in the lateral area of his right leg. Xray (fig. 5) showed an image suggestive of osteoid osteoma or non-ossifying fibroma on the distal third of the fibula. Bone scan also showed increased uptake at the same level.

Surgical intervention revealed a 2.5-cm thorn. The patient later recalled that something had become lodged in his foot two years previously.

DISCUSSION

Bone changes caused by foreign bodies, especially palm tree thorns, usually manifest in the form of occasional inflammation (10), which appears

Fig. 4. — Osteolytic lesion in fourth metacarpal diaphysis (case 2).

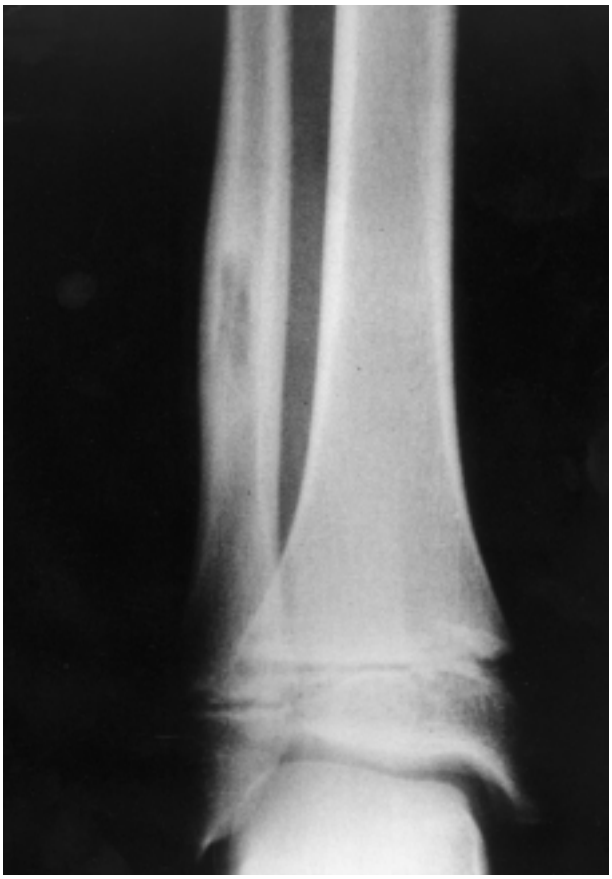

Fig. 5. — Osteolytic xray image of the fibula (case 3)

some time after the trauma, in the case of our patients within 6 months to 2 years. During this period, the foreign body migrates, possibly because of repeated muscle contractions, from the area of trauma, usually distal, to more proximal areas.

Given the nonspecific symptoms, the diagnosis is very difficult, all the more so if the patient has forgotten about the incident. Routine investigations should include two standard xray films. At that stage the differential diagnosis is made (table I).

Laboratory tests are normal. Bone scan demonstrates an isolated and fairly localized increased uptake. The CT-scan demonstrates the limits of the lesion more precisely, and shows images suggestive of a sequestrum, indicating osteomyelitis.

The definitive diagnosis is made on exploration of the lesion when the palm tree thorn is located. After removal, a simple or radical curettage of the lesion is performed, with or without bone graft, according to the size and location of the lesion. Once the cause has been eliminated, recovery is satisfactory and radiological changes disappear, as confirmed in our patients.

No further complications, especially secondary infection or ischemic changes, were noted, unlike cases due to other types of foreign bodies, especially sea urchin spines (2, 5, 7). Urchin spines, despite being of inorganic composition, can produce such alterations due to other material, such as mud, surrounding them. As the lesion is purely reactive and provoked by a specific causal agent, the inflammation disappears once the agent has been removed, without any sequelae.

A sample of bone scrapings was sent to the pathology lab where the diagnosis of chronic nonspecific osteomyelitis was confirmed.

Table I. — Differential diagnosis

Tumoral lesion
Osteoid osteoma
Nonossifying fibroma
Pseudotumoral lesion
Solitary bone cyst
Aneurysmal bone cyst
Cortical fibrous defect
Infectious
Osteomyelitis

The patients eventually remembered the origin of their lesions.

A high degree of suspiscion should be present for this diagnosis in the case of a young male with inflammatory lesion of the distal extremity, when the patient has been to hot climates, for example Southern Spain, where there are many palm trees. Similar lesions, provoked by sea urchin spines, have been described in surfers from the Californian coast.

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SAMENVATTING

A. VEGA CURIEL, M. VILLAVERDE ROMON, F. CARRILLO LUCIA, M. RUIZ DEL PORTAL BERMUDO, A. CARRANZA BENCANO. Schijnbaar tumorale of pseudotumorale botletsels veroorzaakt door de palmdoomboorn.

Botwijzigingen door vreemd lichaamreactie met een tumoraal of pseudotumoraal voorkomen worden beschreven bij drie jonge mannen, die gelocaliseerde inflammatie ter hoogte van de distale ledematen vertoonden met een positieve botscan en suggestieve radiologische veranderingen. De diagnosis werd maar gesteld ter gelegenheid van een heelkundige exploratie, waarbij telkens vreemd lichaamreactie werd gevonden veroorzaakt door een palmdorrn. Verwijdering van de doorn en debridement van de vreemd lichaamreactie gaf telkens genezing zonder verdere verwikkelingen.

RÉSUMÉ

A. VEGA CURIEL, M. VILLAVERDE ROMON, F. CARRILLO LUCIA, M. RUIZ DEL PORTAL BERMUDO, A. CARRANZA BENCANO. Lésions d’aspect tumoral ou pseudotumoral provoquées par les épines de palmier.

Les auteurs rapportent trois observations de lésions osseuses provoquées par des corps étrangers, qui se présentaient comme des lésions tumorales ou pseudotumorales chez des hommes jeunes. Cliniquement, on notait une douleur et une inflammation localisée, l’aspect radiologique suggérait un processus tumoral ou pseudo-tumoral et la scintigraphie montrait une hyperfixation. Le diagnostic a été posé à l’opération, par la découverte d’une épine de palmier. La guérison a été obtenue après enlèvement de ce corps étranger. Le point commun à ces trois cas était l’agent responsable : une épine de palmier.