



Wooden foreign body in the forearm - presentation after eight years

Önkolda ağaç yabancı cisim: Sekiz yıl sonraki başvuru

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We report herein a case in which symptoms appeared eight years after the apparent trauma, which had been forgotten. Surgery yielded a wooden foreign body in the forearm. A 10-year-old boy presented with a six-week history of pain followed by swelling in his left forearm occurring after a trivial blunt trauma, with occasional bouts of fever. There was an oval swelling (7 cm x 3 cm) on the posterolateral aspect of the upper third of the left forearm. Tenderness, increased local temperature and elicitable fluctuation, with no scars or wounds (signs of trauma), were noted. Radiographs of the forearm revealed a soft tissue swelling but no fracture, periosteal reaction or other bony lesion. Aspiration of the swelling yielded purulent material (gram stain negative). The abscess was drained and exploration of the cavity revealed a 14 mm long slender wooden foreign body embedded in granulation tissue. On retrospective enquiry, the family reported that the child had sustained a penetrative injury eight years before after falling on a broomstick. Presence of a foreign body must be kept in mind while investigating a suspicious swelling on the extremities. A thorough history and careful imaging are the keys to diagnosis.

Key Words: Delayed presentation; forearm; foreign body.

Bu yazıda, unutulmuş bir travmadan 8 yıl sonra bulgular gösteren olgu sunuldu. Yapılan cerrahiyle, önkolda ağaç bir yabancı cisim bulunduğunu belirlendi. On yaşındaki erkek çocuk, önemsiz bir künt travmadan sonra sol önkolunda oluşan 6 hafta süreli, şişlikle birlikte olan ağrı ve zaman zaman oluşan kısa süreli ateş yakınması ile başvurdu. Sol önkolun üst üçte birlik kısmının postero-lateral yüzünde 7 x 3 cm boyutunda, hassas, lokal sıcaklığı artmış ve skar ya da yara olmaksızın fluktuasyon veren oval bir şişlik gözlemlendi (travma belirtileri). Önkol radyografileriyle kırık, periosteal reaksiyon veya diğer kemik lezyonu içermeyen bir yumuşak doku şişliği belirlendi. Şişlikten yapılan aspirasyon, pürülan materyali ortaya koydu (gram boyama negatif). Apse temizlendi, yapılan incelemede granülasyon dokusu içindeki 14 mm uzunluğunda ağaçtan ince bir yabancı cisim bulundu. Retrospektif sorgulamada, ailesi çocuğun 8 yıl önce bir süpürge sapı üzerine düştükten sonra penetran yaralandığını bildirdi. Ekstremitelerdeki şüpheli bir şişlik incelenirken bir yabancı cisim varlığı akılda tutulmak zorundadır. Eksiksiz bir öykü ve dikkatli görüntüleme, tanıya yönelik anahtardır.

Anahtar Sözcükler: Gecikmiş başvuru; önkol; yabancı cisim.

Children spend a significant portion of their leisure time outdoors and hence are highly susceptible to hazards relating to plant-associated accidents. Septic arthritis, periostitis, osteomyelitis, and deep soft tissue infections may develop after plant thorn and wood sliver injuries.^[1] Patients often present for evaluation several months or even years after the initial injury, and consequently, clinical evaluation may fail to elicit

a history of antecedent skin puncture. Even when a history of penetrating trauma is suggested, its severity may be difficult to estimate clinically. Imaging techniques are helpful but may not yield consistent results.

We report herein a case in which symptoms appeared eight years after the apparent trauma, which had been forgotten. Surgery yielded a wooden foreign body in the forearm.

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CASE REPORT

A 10-year-old boy presented with a six-week history of pain followed by swelling in his left forearm occurring after a trivial blunt trauma. Initially, the pain was a dull ache with no diurnal variation and was relieved with analgesics. Within a few days, the patient noticed a swelling a few finger breadths below the point of the elbow that gradually increased in size. There was no history of any discharge, redness or rapid increase in the size of the swelling. The patient had occasional bouts of low-grade fever (usually $<100^{\circ}$ F) with no diurnal variation, which resolved with medication. There was no significant weight loss or loss of appetite. The only disability was in lifting weights, which had become painful.

On examination, the patient was afebrile; there was an oval swelling on the posterolateral aspect of the upper third of the left forearm, oriented longitudinally and measuring 7 cm x 3 cm (Fig. 1). Tenderness, increased local temperature and elicitable fluctuation were present. The consistency was soft and surface smooth; margins were ill-defined and the overlying skin was normal with no scars or wounds (signs of trauma). There was no restriction in elbow motion. No lymphadenopathy was found.

Radiographs of the forearm revealed a soft tissue swelling but no fracture, periosteal reaction or other bony lesion (Fig. 1). Initial laboratory findings included a raised total leukocyte count ($13,400/\text{mm}^3$ with 68% polymorphonuclear leukocytes) and an elevated erythrocyte sedimentation rate (40 mm/1st hour).

Aspiration of the swelling yielded purulent material (gram stain negative), and the patient was taken for abscess drainage under anesthesia, considering the swelling as a soft tissue abscess. Operative findings



Fig. 1. Clinical photograph and radiographs of the patient. Note the swelling on the posterolateral aspect of the upper forearm. Radiographs are normal.

revealed an abscess cavity walled off by thick granulation tissue along the posterolateral aspect of the ulna. The abscess was drained and exploration of the cavity revealed a 14 mm long slender wooden foreign body embedded in granulation tissue that was removed (Fig. 2). The wound was closed and the patient was treated with antibiotics. The pus was found to be sterile.

On retrospective enquiry, the family reported that the child had sustained a penetrative injury eight years before after a fall on a broomstick.

The postoperative period was uneventful and the patient was doing well at six months follow-up.

DISCUSSION

The case reported here is characteristic of a long-standing foreign body in soft tissue in which the initiating or original trauma has been forgotten. The patient in this case is a 10-year-old child who could not have remembered an eight-year-old trauma. Considering patients with musculoskeletal tumors, they usually have a spurious recollection of trauma that antedated their symptoms. Hence, a history of trauma in the remote past may be treated with skepticism by the surgeon. If, however, the history of penetrating trauma is significant, the possibility of a mass associated with a long-standing foreign body should be considered.^[2]

Radiographs are usually unrewarding in the search for retained foreign bodies, as in this case. They have been reported to reveal a foreign body in only 15% of affected patients.^[3] Wooden foreign bodies are usually radiolucent but their size may be so small that it does not create sufficient soft-tissue lucency on X-rays to suggest a radiolucent foreign body.^[4] Despite their size, however, foreign bodies are no small matter. When left untreated, they can cause infection, inflam-

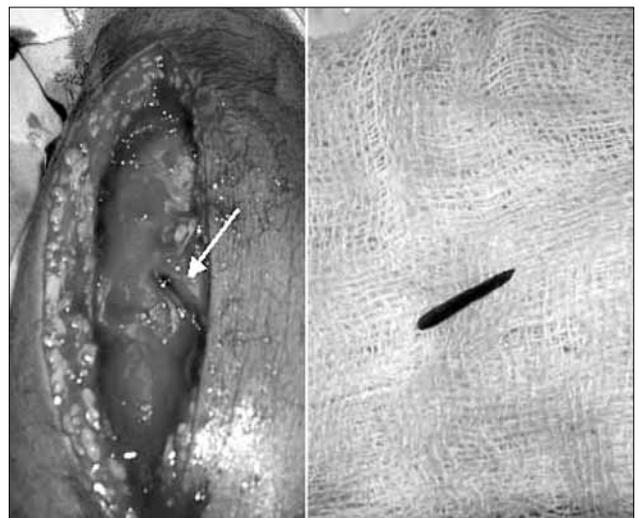


Fig. 2. Perioperative photograph depicting the wooden foreign body lodged in soft tissues.

mation, allergic reaction, and tendon or nerve injury, and their removal is necessary.

Sonography is an accurate and widely used imaging modality suggested for the detection of superficial soft tissue foreign bodies and, unlike conventional radiography, is not subject to radiographic density of the foreign body.^[5] It is a valuable modality in the diagnosis of clinically unsuspected foreign bodies in soft tissue masses, as in our case, sparing the use of more elaborate and expensive imaging.^[5] We did not perform sonography in our case as we were unsuspecting of a foreign body.

What causes sudden onset of symptoms in an otherwise inert foreign body, lodged in the body for years, is debatable. In this case, the foreign body had been lying inert and walled off in the soft tissues for eight years. Another trauma to the same region, though it was trivial, may have led to the foreign body becoming symptomatic probably by disruption of the surrounding fibrous wall, inciting fresh inflammation.

The diagnosis of an embedded foreign body was

not suspected in our case initially, and it surfaced only during exploration of the abscess cavity. The history in such cases may be totally forgotten or not revealed, presumed as unimportant. A thorough patient history and careful imaging in suspected cases remain the keys for diagnosis of retained foreign bodies.

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