

Case report

Burkitt's lymphoma presenting as an intermittent limp

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ABSTRACT

Musculoskeletal pain is a frequent complaint in pediatrics usually related to benign conditions. However, it may also represent the initial symptom of serious diseases such as infections, malignancies or orthopedic emergencies.

We present the case of a child diagnosed with Burkitt's lymphoma whose initial presentation was a limp. This is, to the best of our knowledge, the first case reported in the literature with this type of debut.

This case illustrates the importance of including neoplasms in the differential diagnosis of atypical musculoskeletal pain, since early diagnosis can significantly improve their prognosis.

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Cojera como forma de debut de un linfoma Burkitt

RESUMEN

Los dolores musculoesqueléticos son un motivo de consulta frecuente en Pediatría. En la mayoría de las ocasiones se trata de síntomas inespecíficos sin relación con enfermedades graves, aunque pueden representar el síntoma inicial de procesos que requieran una atención inmediata como son infecciones, neoplasias o urgencias ortopédicas.

Presentamos un niño diagnosticado de linfoma Burkitt cuyo único síntoma de presentación fue una cojera. Se trata del primer caso descrito en la literatura con este debut.

Este caso clínico ilustra la importancia de incluir en el diagnóstico diferencial del dolor musculoesquelético de evolución atípica a las neoplasias, dado que un diagnóstico precoz puede mejorar significativamente su pronóstico.

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Palabras clave:

Neoplasia

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Introduction

Musculoskeletal pain (MSP) is a very common reason for consulting in Paediatrics. Although it is usually due to a benign cause, neoplasm processes should be considered in differential diagnosis.

We present the unusual case of a boy with Burkitt lymphoma presenting with a limp.

Clinical observation

The case involves a 3 year-old boy with no significant clinical history, who presented with a feverish cold and right limp diagnosed

as transient hip synovitis treated with anti-inflammatories. After a month of erratic limp evolution, he started with a pain in the right knee that would wake him up at night. The physical examination, together with x-rays of the pelvis, femur and ipsilateral knee were normal. A synovial thickening was seen in the hip ultrasound together with bilateral intrarenal injury in the abdominal ultrasound and findings compatible to bilateral nephroblastomatosis in the abdominal magnetic resonance (MRI). Bone scan, blood count, biochemistry with LDH and reactants were normal.

Chemotherapy was started and there was a reduction in the lesion in the MRI carried out 2 months later, but he still continued having pain and there was swelling in the right leg, which is why he was referred to Rheumatology.

A tibial subperiosteal collection was seen in the ultrasound and the x-ray was normal. The bone scan showed an uptake increase in the proximal half of the right tibia. An MRI was requested, which revealed changes in the marrow of the femur, tibia and right fibula

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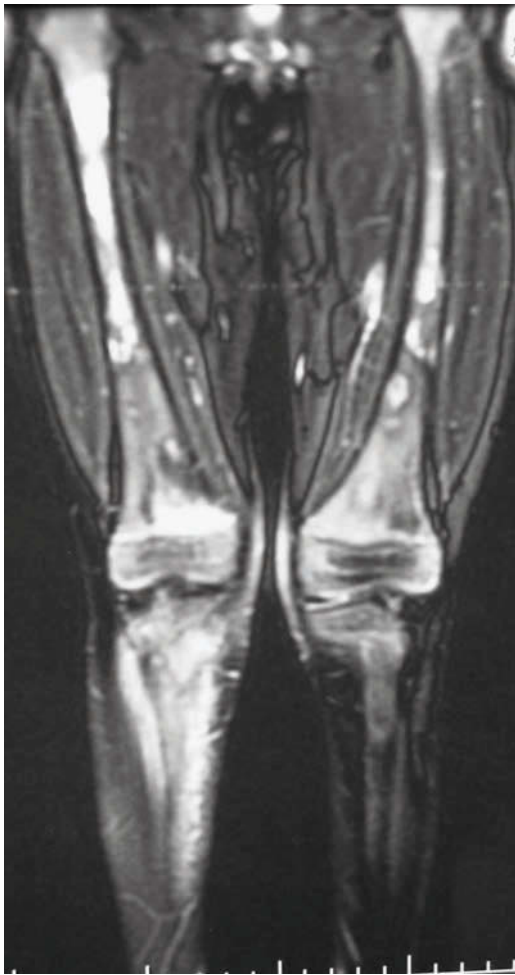


Figure. MRI image of the lower limbs: abnormal marrow signal intensity that mainly affects the distal femoral metaphysis, proximal fibular metaphysis and right tibia, with bilateral femoral shaft involvement.

(Figure). A bone biopsy was carried out and intravenous antibiotics were started. The cultures were sterile and the pathological anatomy revealed necrosis and unspecific chronic inflammation. A week later a cervical adenopathy was detected whose FNA gave the final diagnosis: Burkitt lymphoma. The marrow immunohistochemistry confirmed the diagnosis. The extension study was negative. Specific chemotherapy was started.

Discussion

Of all consultations in Primary Care for those over 3 years of age, MSP represents 6%.¹ It is generally benign, although there is sometimes a underlying disorder whose early diagnosis is essential for a good prognosis.²

In neoplasms, MSP can be produced by 1) bone and cartilage tumours; 2) bone metastases; 3) bone infiltration due to malignant cells (leukaemias and lymphomas^{2,3}). Intense pain during the night suggests a neoplastic etiology.⁴

In our case, the pain showed up as a limp. Incidence of limping in childhood is unknown, although a study in Accident and Emergency showed a rate 1.8 per 1,000 children under the age of 14 for non-traumatic limping.⁵ Transient hip synovitis is the most frequent cause of sudden limping in childhood.^{6,7} In the case presented, persistent pain together with normal hip examination and no effusions indicated that MSP was not the correct diagnosis.

The first, easiest image test that should be carried out are X-rays. They can detect fractures, lytic lesions and avascular necrosis. Ultrasound is the choice to identify joint effusions. A bone scan is highly sensitive in detecting the increase of bone metabolism, but it is unspecific, as it can be altered by neoplasms, osteomyelitis or avascular necrosis. MRI has more ability to distinguish between these etiologies.⁵

In nephroblastomatosis, many oncologists opt for early chemotherapy for a pre-malignant lesion that can turn into a Wilms tumour.⁸

Burkitt lymphoma is a neoplasm of highly aggressive B cells, which has three types of clinical form. The most frequent one in our area is sporadic. It usually presents itself as a fast growing abdominal mass, with frequent tumoral lysis that affects the bone marrow in 30%-40% of cases,⁹ facts that were present in our patient. We have not been able to find musculoskeletal symptoms as the only form of presentation for Burkitt lymphoma in reviewed literature.

Conclusions

Although MSP is usually a benign etiology, its persistence, presence of night-time symptoms and its functional limitation oblige us to follow it up and consider a neoplastic etiology, as it can be the first sign as in our case.

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