

Chronic lymphocytic leukaemia masquerading as a backache

S Nawghare, K Muralikuttan

Citation

S Nawghare, K Muralikuttan. *Chronic lymphocytic leukaemia masquerading as a backache*. The Internet Journal of Orthopedic Surgery. 2008 Volume 13 Number 2.

Abstract

An innocuous backache may be a clue to something more serious. We present the case of a seventy two year old man with a backache ,who was diagnosed as a metastasis of chronic lymphocytic leukaemia (CLL).Metastasis of chronic lymphocytic leukemia to the bone is an extremely rare complication .We report the first case of CLL metastasis to the proximal femur. This is perhaps the second case of a metastasis of CLL to the bone . Diagnosis depends on the histology. Its presence should be considered in patients with CLL presenting with low back pain . One should be aware of its existence or it may be missed .

INTRODUCTION

Chronic Lymphocytic Leukemia (CLL) is the most common lymphoproliferative disease and affects the older people. It is characterised by uncontrolled proliferation and accumulation of mature B lymphocytes. In most cases, it is asymptomatic. Symptoms can occur secondary to bone marrow infiltration. The spleen, lymph nodes, liver and bone marrow are primarily involved. A second malignancy may be encountered in a patient with CLL. There are reports of spread of CLL to the leptomeninges, gastro-intestinal tract, prostate and intervertebral disc(1,2,3,4,). CLL seldom involves the bone and may present with areas of osteopenias (2). A report of presentation of CLL as a pyogenic arthritis of the proximal interphalangeal joint exists (5). A literature search brought forth a single case of spread of CLL to the bone (6). However , there are no previous reports of metastasis of CLL to the proximal femur.

CASE REPORT

We present a case of a seventy two years old gentleman, who presented to us with a low backache. Blood investigations followed by the haematologist's opinion confirmed a CLL (Rai stage 0). MRI of the spine aroused a suspicion of leukemic infiltration of T9 vertebra. A spinal biopsy revealed a normal histology. A trephine biopsy from the iliac crest confirmed a CLL. A search for a primary in other organs was futile. With analgesia, the pain improved and the patient continued to walk with a stick. He was reluctant to investigate further and returned to work. Eight months later he was admitted with excruciating lower back

pain restricting him to his bed. He felt better with analgesia and bed rest. Unfortunately, during his stay in the hospital, he had sudden onset of sharp pain in his right thigh. Radiograph revealed a pathological subtrochanteric fracture of his right femur with evidence of metastasis (Fig 1). The opposite femur radiograph also exhibited similar changes without a fracture(Fig 2). The subtrochanteric fracture in the right femur was fixed with a long gamma nail(Fig 3) . The opposite femur was also fixed with a long gamma nail as a prophylaxis(Fig 3). The remainings from the subtrochanteric fracture were sent for histological study.

To our surprise, the histological analysis revealed a B cell chronic lymphatic leukaemia.

Figure 1

Fig 1 Radiograph of pathological fracture of proximal femur



Figure 2

Fig 2 Radiograph showing lytic changes in the left femur



Figure 3

Fig 3 Radiograph after fixation



DISCUSSION

Backache is a common problem in the population. It should not be ignored until investigated fully. A critical examination of the hips should be a mandatory part of every back examination. Something more sinister may present in the disguise of a backache. Unless we are careful, it may easily be missed. Metastasis of CLL to the bone is extremely rare. As it is so uncommon, it may not be diagnosed and may go unreported. Early diagnosis and immediate action may reduce the morbidity associated with pathological fracture. Histology is essential for diagnosis. This is probably the second case of CLL metastasis to the bone and the first one to metastasize to the proximal femur. To our knowledge this is the first published case of spread of CLL to the proximal femur. Awareness of its presence is vital to the prevention of associated morbidity.

References

1. Eddes EH, Fibbe WE, Loyson SA, Zwartendijk J. Urinary symptoms due to leukemic infiltration of the prostate. A case report. *Ann Hematol.* 1993 Jun;66(6):323-4
2. Jiya TU, Royen BJ, Sugihara S, Van Diest PY, Manolui RA, Wuisman PI. Lumbar intervertebral disc involvement in chronic lymphocytic leukaemia. A case report. *Spine.* 1998 Sep 1;23 (17):1895-9
3. Kuse R, Lueb H. Gastrointestinal involvement in patients with chronic lymphocytic leukaemia. *Leukemia.* 1997 Apr; 11 Suppl 2: S50-1
4. Lange CP, Brouwer RE, Brooimans R, Vecht ChJ. Leptomeningeal disease in chronic lymphocytic leukaemia. *Clin Neuro Neurosurg.* 2007 Dec;109(10) 896-901
5. Chin KR, Pess GM, Jupiter JB. Chronic lymphocytic leukaemia presenting as

pyogenic arthritis of the proximal interphalangeal joint. J
Hand Surg Am..
1998 May; 23(3):545-50

6. Maria P.Stefanidou, Panayotis E Kanavaros , Androniki
D.Tosca. Chronic lymphocytic leukaemia presenting as
cutaneous and bone involvement.
Int J Dermatol Volume 40 Page 50-Jan 2001

Author Information

Sishir P. Nawghare, MRCSed

From The Department of Orthopaedics, The Calderdale Royal Hospital, Halifax, U.K.

K.P. Muralikuttan, FRCS

From The Department of Orthopaedics, The Calderdale Royal Hospital, Halifax, U.K.