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Case Report

Acute Paraparesis with the First Presentation of Cord Compression Secondary to Vertebral Involvement of Lymphoma: a Case Report

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ABSTRACT

Lymphoma of spine with cord compression is a rare entity. It usually presents in elderly males as low backache and radiculopathy. Main pathological type is diffuse large B cell lymphoma. In this case report, we presented a 27-year old man with extra-nodal B cell lymphoma presented to emergency department for 2 months history of chest, backpain and paraparesis.

Keywords: *Non-Hodgkin's lymphoma,vertebral involvement, spinal cord compression*

ÖZET

Lenfomanın Vertebral Tutulumuna Bağlı Olarak Kord Kompresyonu İle İlk Kez Akut Paraparezi: Vaka Sunumu

Kord kompresyon spinal lenfomada nadir bir olaydır. Genellikle yaşlı erkeklerde, bel ağrısı ve radikülopati ile bulgu verir. Ana patolojik tip diffüz büyük B hücreli lenfomadır. Bu vaka sunumunda, ekstranodal tutulumlu B hücreli lenfoma nedeni ile 2 aydır göğüs ağrısı, bel ağrısı ve paraparezi ile acil servise başvuran 27 yaşında erkek hastayı bildirdik.

Anahtar Sözcükler: *Non-Hodgkin lenfoma, vertebral tutulum, spinal kord kompresyonu*

Lymphoma is a systemic disease (1,2). Skeletal involvement occurs in 5-16% of the cases with Non-Hodgkin's Lymphoma (NHL) (2). Spinal cord compression is rare presentation of NHL occuring 0.1-3.3% of patients (2). It is commonly caused by extradural disease either because of an isolated deposit within the spinal canal or by the extension from adjacent nodal mass or bone involvement (1,2). The clinical features of spinal lymphoma have been divided in two phases; the first phase is a prodromal phase in which local pain is common and second phase is characterized by features of compression of cord or cauda equina (1-3). Radicular pain followed extremity weakness, paresis and paralysis. In this report, we present a 27-year old man for 2 months history of backpain and 1 week history of walking difficulty, ataxix secondary to spinal cord compression of bone lymphoma.

CASE REPORT

A 27 year old man presented to emergency department for 2 month history of chest and backpain. One month history of progressive weakness, paresthesia of his legs, ataxic walking difficulty developed for 3 days before his admittance. The presenting complaint of our patient was backpain and treatment with non-steroidal anti-inflammatory drugs (NSAID) complaints resolved at first. No neurological deficit were mentioned in his previous medical records. He mentioned about loss of 10 kg with in the last 2 months.

Neurological examination assessed (manuel muscle test) bilateral lower extremites muscular strength were 3/5. Babinski sign was positive. There was clonus bilaterally. Her gait was ataxic with searching steps and romberg's sign was present. Sensation was decreased to light touch pinprick in and below the Thoracic vertebra (Th) 9 dermatome level. Vibration sense was decreased. Ankle reflexes were decreased bilaterally.

Magnetic resonance imaging (MRI) and Computer tomography (CT) showed diffuse involvement of dorsal and lombar vertebrae. There was involvement of the paravertebral soft tissue of the Th 9, 10, 12 and lumbar 1, 2,-5 and pathologic compression fractures with

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retropulsion of the posterior vertebral bodies (Figure 1, 2). Multiple osteolytic bone lesions with cortical destruction vertabrae. After surgery, abdominal ultrasonographic (USG) examination was performed. Hepato-splenomegaly, mild nephromegaly, several lymph nodes around sternoclavicular muscle were found. Thorax and abdominal CT scans were performed, mediastinal and hilar lymphadeopathies were found on scannings.

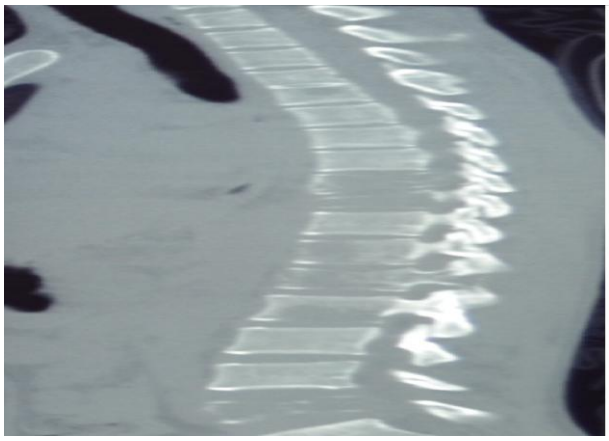

Figure 1. *CT showing cord compression secondary to vertebral involvement of lymphoma.*

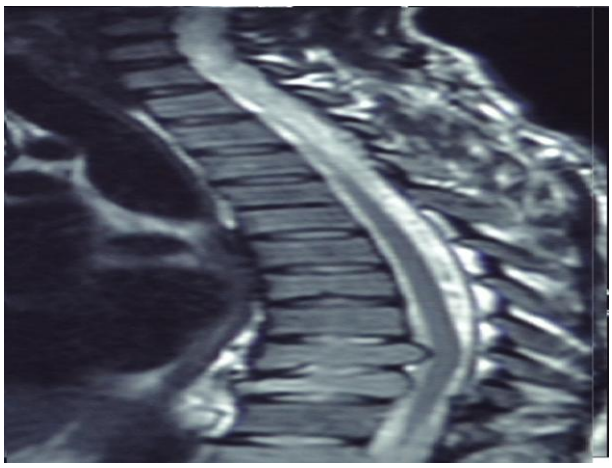

Figure 2. *MRI showing cord compression secondary to vertebral involvement of lymphoma.*

The day his admittance, emergent surgery was done. Decompression of thoracal 9, 10, 12 and lumbar 1, 2, 5 vertabrae with laminectomy and excission of paravertebral mass lesion, lumbar 5 vertebra transpediculer percutaneus corpus biopsy was done. Tumor was soft suckable, moderately vascular. High dose corticosteroid was postoperatively given but neurological examination was not improved.

Material was evaluated by hematoxyline-eosin stainning and immuno-histochemistry. LCA CD19 were pozitive. CD3, EMA, Desmin, S100, CD30, CD34, 68, 56, 117 were negative. The pathological diagnosis was extranodal B cell lymphoma (Figure 3).

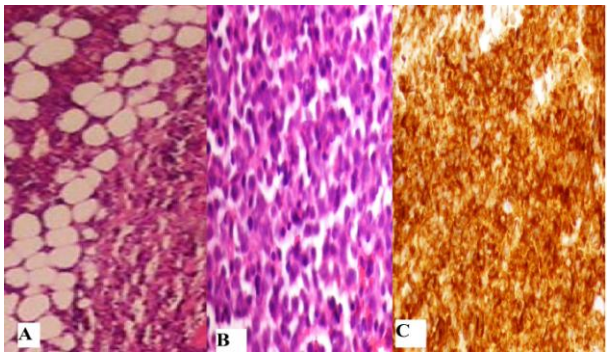

Figure 3*. Hematoxyline-eosin stainning and immuno-histochemistry LCA CD19 showing extranodal B cell lymphoma.*

After pathological diagnosis, the patient was treated with both radiotheraphy and chemotherapy. He died 2 months after operation because of infection.

DISCUSSION

Skletal involvement by lymphoma is more common in males than females (4,5). Usually the lumbar or lower dorsal spine is involved. The usual age presentation is $5^{th}$to 6 thdecade of life (5). In this case, patient age was 27. Younger age favorable prognostic factors. According to WHO classification of lymphoma involving any other site and found by bone biopsy stage was 4 as in our case (6).

Skeletal involvement occurs in 5-16% of the cases with NHL (2). Secondary spinal vertebrae lypmhoma (stage4) is more common than primary lymphoma (stage1) (1,7).

According to Coleys criteria, our case is secondary bone lymphoma (8-10). Our patient presented with low backpain at first and then radiculopathy, ataxy, paraparesis of limps because of compression of cord as the clinical features of spinal lymphom as phases.

MRI showed signal changes in dorsal, lomber vertebrae. Both osteolytic and osteoblastic changes has both high and low signal marrow abnormalities on T1 and T2 weighted images. Atypical imaging of NHL infiltration of bone lesion on CT scans showed classical moth-eaten apperance. To demonstrate location and distribution of lesion paravertebral softtissue masses and compression fractures MRI was useful than CT (1,7).

On imaging the differential diagnosis includes osteosarcoma, Ewing's sarcoma tumors, lymphoma metastasis, small cell of lung metastasis, multiple myeloma. Diffuse large B cell lymphomas are highly invasive. Our case 's WHO classification stage was 4.

Cauda equina or paraparesis of lower extremites emergent surgical decompression is a must. Followed by only radioterapy is the treatment choice. Several studies have suggested that combined modality chemoteraphy and radioteraphy was best treatment for these patien (8,10).

CONCLUSION

Backpain is a common symptom with numerous etiologic factors. Intervertebral disc, spinal stenosis, fracture, dislocation of spine, infections, neoplasms. Every clinician should remember that malignancy is one of the reasons of backpain even if in youngsters. Paraparesis with spinal cord compression fracture decompressive surgery is an urgent. Early diagnosis and treatment is important to survey. In an emergent situation such as our case, decompression of spinal cord and histogical diagnosis are essential to achieve a favoruable neurological out come.

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