ORIGINAL RESEARCH PAPER

Medical Science

ANAPLASTIC LARGE CELL LYMPHOMA METASTASIS AT LUMBAR VERTEBRA -A RARE CASE PRESENTATION

KEY WORDS: Anaplastic Large cell Lymphoma, Hodgkin's Lymphoma

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ABSTRACT

Introduction: ALK+ Anaplastic large cell lymphoma metastasis at lumbar vertebra is rare entity. ALCL commonly occurs in lymph node and extra nodal sites, bone, respiratory tract, skin and gastrointestinal tract, among which the most frequent involvement is skin(21%) followed by bone(17%). Primary involvement in bone of ALK+ ALCL is not uncommon but ALCL metastasis at lumber vertebra is uncommon. Anaplastic large cell lymphoma (ALCL) is a neoplasm of highly pleomorphic lymphoid cell occurring in young age group. **Case History:** 18-year-old male patient with complain of low back pain and previous history of extrapulmonary tuberculosis for 2 months diagnosed by FNAC. MRI: Multifocal multicentric soft tissue lesion involving entire spine and hip bones which is likely neoplastic etiology. Histopathology: Metastasis of Anaplastic large cell lymphoma in pedicle of lumbar vertebra. IHC done at higher center: Anaplastic large cell lymphoma ALK positive. **Result & Discussion:** ALCL commonly occurs in lymphnode and extranodal sites but ALCL metastasis at lumber vertebra is rare entity.

INTRODUCTION:

ALCL commonly occurs in lymphnode and extranodal sites bone, respiratory tract, skin and gastrointestinal tract but ALCL metastasis at lumber vertebra is rare entity. ALCL is most common type of PTCL. It is characterized by infiltration of highly pleomorphic large lymphocyte that express strong reactivity with antibodies directed against CD30, a T cell activation associated antigen.

ALCL occurring in young age group and male predominance. (1,2) Extra cutaneous involvement occurs in 5-10% of patients, mostly to the draining regional lymph nodes. WHO classification: primary cutaneous, ALK+ ALCL, ALK - ALCL.

Case History

An 18-year-old male patient admitted in orthopedic department with complain of low back pain since 10days. Patient had prior history of low grade fever, weight loss, swelling in neck and axilla region 1.5 month back and he had taken treatment of tuberculosis after diagnosed as tubercular lymphadenitis by axillary Lymph node FNAC.

USG: Significantly enlarge ennumber of lymph node seen in neck and axilla. On both side of neck 17×14mm and 22×14 mm and 44×22mm oval mass in left axilla.

FNAC: Left axilla Swelling-TUBERCULUS LYMPHEDINTIS.

CBNAAAT: Lymph node: Not detected

MRI Lumbar spine: Multifocal multicentric soft tissue lesion involving entire spine and hip bones which is likely neoplastic etiology.

FDG PET CT: Hypermetabolic supra and infra diaphragmatic nodes and osseous lesions possibility of infective etiology rather than neoplastic etiology.

Histopathology:

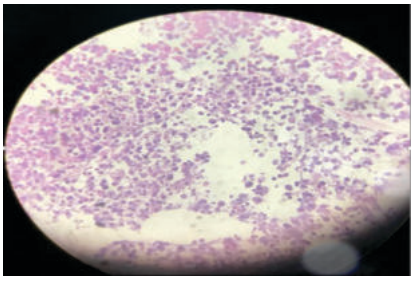
After excision specimen of **pedicle of lumbar vertebra** received in 10% formalin, consist of 0.7x0.7 size.

Gross: Collectively measuring 0.7x0.7 cm sized greyish white to greyish brown soft tissue received.

Microscopy:

H&E stain section shows of sheets of lymphoplasmacytic inflitrate, there are few scattered atypical cell with c-shaped nucleus, ring shaped nucleus, many binucleated cell with prominent nucleoli are also seen.

There is background necrosis with many inflammatory cells and multinucleated giant cell are seen.



ALCL, characterized by Lymphoplasmacytic infiltrate, few scattered atypical cells with c-shaped nucleus, Ring shaped nucleus, Many binucleated cells seen.

Differential Diagnosis:

1.Anaplastic large cell lymphoma
2.Hogkin's lymphoma

IHC done at higher center:

USG guided trucut biopsy of left axillary node. Interpretation: the features are consistent with those of an **anaplastic large cell lymphoma ALK positive.**

After diagnosis, patient has taken chemotherapy

DISCUSSION:

ALK+ Anaplastic large cell lymphoma metastasis at lumbar such as bone marrow vertebra is rare entity. ALCL commonly occurs in lymph node and extranodal sites, bone, respiratory tract, skin and gastrointestinal tract but ALCL metastasis at lumber vertebra is uncommon. ALCL was recognized in 1985, when tumor cells consistently demonstrated labelling by the monoclonal antibody Ki-1, a marker later shown to recognize the CD30 antigen. In 1988, ALCL was added as a distinct entity to the revised Kiel classification, and in 1994, it was included in the Revised European-American Lymphoma (REAL) classification. (3,4) All cases of ALCL, 15-20% occur in persons younger than age 20 years. (5) In the systemic form of anaplastic large cell lymphoma (ALCL), the translocation t(2;5) results in a novel fusion protein, nucleophosmin (NPM)–anaplastic lymphoma kinase (ALK), which may play an important role in the pathogenesis. Excisional biopsy of lymphadenopathy is necessary to confirm the diagnosis of ALCL. The morphology of ALCL is similar within its major clinical sub forms, the primary systemic and cutaneous varieties. ALCL is distinguished from other large cell lymphoma by combination of its characteristic histologic appearance and diffuse positivity for CD30.

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