CASE REPORT

Osteosarcoma of Thoracic Spine

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Abstract

A 34 year male presenting with upper motor neuron type paraplegia due to osteogenic sarcoma of dorsal vertebrae is being presented. He was operated and subjected to radiotherapy. This case is being reported because of its rarity.

Key words

Thoracic spine, Osteosarcoma.

Introduction

Osteogenic sarcoma is a malignant tumor of bone in which the malignant proliferating spindle cell stroma directly produces osteoid or immature bone. Osteogenic sarcoma is the most common primary malignant bone tumor (excluding multiple myeloma). It is approximately twice as common as chondrosarcoma and three times more frequent than Ewing's sarcoma. The most frequent occurrences of osteogenic sarcoma correspond to the periods of peak skeletal growth in childhood. The growth potential of each individual long bone generally dtermines the frequency of tumor occurrence. Accordingly the femur (14.5%), the tibia (16%) and the humerus 15% are the most common sites for osteogenic sarcoma (1). Until the cessation of growth period, the long bones are the bones most frequently involved in osteogenic sarcoma. After this growth period, the long and flat bones are equally affected. Approxzimately 10% of osteogenic sarcomas arise in the axial skeleton (i.e. skull, ribs, pelvis and vertebrae). Osteosarcoma of the spine is rare, accounting for 0.6%-3.2% of all osteosarcomas and 5% of all primary malignant tumors of the spine (2). we are also presenting a rare case of osteogenic sarcoma of the thoracic spine.

Case Report

A 34 year old male patient presented to us with chief complaint of pain upper back for the last 6 months, weakness both lower limbs for the last 14 days and retention of urine for the last one day. The pain was insidious in onset, mild to moderate in intensity, dull aching and continuous type. There was no history of any radiation of pain and no relation with straining. About 14 days back patient developed weakness of both lower limbs which was sudden in onset and for the last one day patient was having retenton of urine. There was history of loss of weight and loss of appetite. There was no history of trauma, fever, cough, pain chest, haemoptysis and night cries. There was no significant past and family history.

There was paravetebral spasm. Tenderness over D 6, 7, 8 was present. Neurological examination revealed upper motor neuron parapresis and hypoesthesia below D7 level. a clinical diagnosis of compressive myelopathy with caries spine at D6, 7, 8 was made.

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Routine investigations including x-ray dorsal spine and x-ray chest were normal. CT scan (Fig. 1) showed destruction of appendages with extradural collection and again a diagnosis of caries spine D 6, 7, 8 was made.

Anterolateral decompression was done. peroperative there was no abscess. The tissue was friable and reddish brown. The tissue was taken for biopsy. The histopathology report was osteoblastic osteogenic sarcoma (Fig 2). Postoperatively, there was no neurological improvement. After the wound healed, patient was put first on radiotherapy and then on chemotherapy. After discharge from the hospital he never reported back.

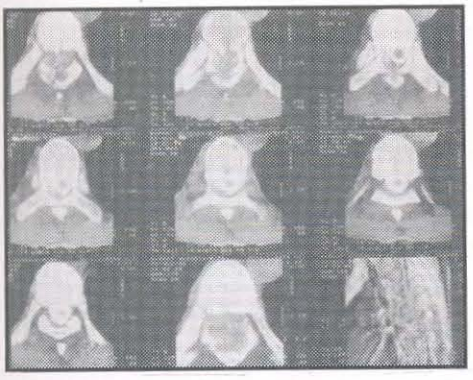

Fig. 1. CT scan of dorsal spine showing destruction of appendages and extradural collection.

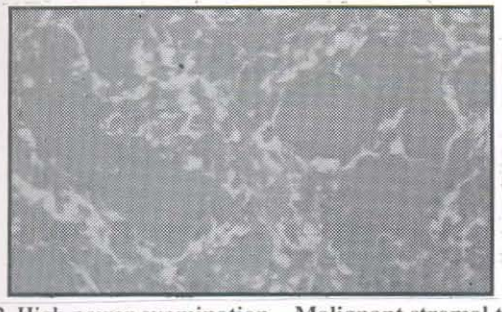

Fig. 2. High power examination – Malignant stromal tissue showing osteoid formation.

Discussion

Primary osteogenic sarcoma of the spine., in the absence of previous irradiation or paget's disease is extremely rare and only a handful of cases have been reported. In a study conducted by Dahlin *et. al.,* out of 600 cases of osteogenic sarcoma only 9 cases were of osteosarcoma of spine, (3). In a similar study by Weinfeld *et. al.* from 1920 to 1960, they reported three cases of osteosarcoma out of total of 94 patients (4). In another study, in a sries of 1122 patients treated at the Mayo clinic between 1909 and 1980, there were 27 patients (2.4%) with primary lesion of the spine. Over a similar time period, 24 patients with osteosarcoma of the spine (approximately 2% of all osteosarcoma cases) were seen at Memorial Sloan-Kettering cancer cente. Patients with osteosarcoma of spine were on an average a decade older than patients with extremity lesions and approximately half the cases were secondary to other conditions (5). Incidently our patient happens to be in the same age group. Most patients with osteogenic sarcoma of the spine present with pain related to the site of the tumor in combination with varying neurologic deficits. Since early symptoms may be nonspecific, such patients are generally diagnosed as having benign disc lesion. The median duration of symptoms prior to diagnoses was 6 months (range 1 month to 120 months) in the two major series of Shives *et. al.* 1986 (6) ad Saudaresan *et. al.* 1988 (5). Two thirds of patients reported in the literature had neurologic deficits ranging from radiculopathy to complete paraplegia at initial presentation. These clinical findings indicate epidural extension of tumor in all patients at the time of diagnosis and have adversely affected the feasibility of curative resection.

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