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Case Report

Multiple atraumatic osteoporotic vertebral fractures: Unusual cause of pain in adult



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ABSTRACT

Secondary osteoporosis may not be detected early, and thus the condition remains clinically silent until the patient presents with multiple atraumatic compression fractures. It is devastating for a young patient to develop multiple vertebral fractures in view of the associated morbidity and mortality. To decrease the risk of additional fractures and preserve the quality of life in these patients, interventions should be initiated early. Hence, it is important to consider multiple osteoporotic vertebral fractures as a complication in any patient on prolonged steroid therapy.

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1. Introduction

Osteoporosis is a progressive metabolic bone disease characterized by decrease in bone mineral density and deterioration in bone structure, leading to an increased risk of fracture.¹ It may be classified as primary type 1 (postmenopausal osteoporosis), primary type 2 (senile osteoporosis), and secondary osteoporosis, which accounts for <5% of the osteoporosis cases.² Secondary osteoporosis may arise at any age and affects both men and women equally; it results from chronic predisposing medical problems, like hyperparathyroidism, renal osteodystrophy, or prolonged use of medications including glucocorticoids, thyroxine, etc.³

Osteoporotic vertebral fracture is common in the elderly and postmenopausal women, but is very uncommon in young adults.⁴ This poses a diagnostic challenge, as only

about one-third are recognized when they become symptomatic and they usually present with acute back pain, or with loss of height and increasing kyphosis. Up to 30% of women and 55% of men with symptomatic vertebral crush fractures have underlying secondary osteoporosis.⁴ The sequel to multiple atraumatic osteoporotic vertebral fractures may be devastating, especially in the young. Up to 20% patients with an incident vertebral fracture experience a further vertebral fracture within one year.^{4,5}

We report a case of multiple atraumatic osteoporotic vertebral fractures following prolonged steroid therapy, where 11 vertebral bodies were found collapsed in the dorsolumbar region. This condition is uncommon in young adults, and requires the clinician to maintain a high index of suspicion in patients with back pain, who are on prolonged steroid therapy, to make an early diagnosis and start the treatment, in order to minimize morbidity.

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2. Case report

A 32-year-old male patient presented with an 18-month history of non-radiating back pain, which progressively worsened over a period of time. His pain got aggravated by activity and was relieved by taking rest and using analgesics. The pain was severe enough to interfere with his activities of daily living and necessitated the use of a walking stick for ambulation. He has been on steroid therapy for the last 6 months for his back pain. There was no history of any trauma.

Physical examination revealed a morbidly obese young male with Body Mass Index (BMI) of 40. He had cushingoid facies (Fig. 1), with multiple striae all over the abdomen and the axillary folds (Fig. 2). The back revealed a buffalo hump, with



Fig. 1 – Typical cushingoid facies of the patient.



Fig. 2 – Multiple striae over the anterior abdominal wall.



Fig. 3 – Lateral view of lumbar spine showing severe osteoporosis and multiple collapse of vertebral bodies.

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