Osteoblastoma Mimic Failed Back Surgery

Juan F. Blanco¹, Susana Gomez-Castro², Ruth Lopez-Gonzalez², Juan C. Paniagua³

¹Department of Trauma and Orthopedics, Hospital Universitario de Salamanca, Salamanca, Spain
²Department of Rheumatology, Hospital Universitario de Salamanca, Salamanca, Spain
³Department of Radiology, Hospital Universitario de Salamanca, Salamanca, Spain
E-mail: juanblanco@telefonica.net; susigom888@yahoo.es; ruthielg@hotmail.com; ruthielg@hotmail.com

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Abstract

A 44 year-old women with persistent back and irradiated pain after discectomy in L5 - S1 lumbar level presented a osteoblastoma in L4 - L5 level. The osteoblastoma mimic a failed back surgery. She was successfully treated by removing the tumour with instrumented posteroalateral fusion. This case warns people that a new disease (such as a tumour in this case), irrelevant to the original one, may happen simultaneously even if the original one has been successfully treated and should be differentiated from the previous disease or surgical failure and complications.

Keywords: Osteoblastoma, Lumber Spine, Surgery, Back Pain, Disc Herniation

1. Introduction

Osteoblastoma of the spine is a rare benign bone tumour accounting for less than 1% of all primary bone tumours [1]. Generally, it affects persons 10 to 40 years of age, with a male to female ratio of approximately 2 to 1 [2,3]. Spinal involvement occurs in 35% to 45% of cases. Lumbar localization is frequent. The majority arise from posterior spinal elements: pedicles, lamina and facets [4,5]. Clinically the patients with osteoblastoma have pain and stiffness [6,7]. This case is presented because of its rarity and also it happened after spine surgery; this one was the reason of the delay in the diagnosis. The symptoms were attributed to a syndrome of failed back surgery.

2. Case Report

44-year-old women were admitted in June 2006 with low back and irradiated pain. The past medical history included: appendectomy, hysterectomy and depression. In 2004 a lumbar discectomy was performed because of a slipped disc in L5 - S1 level (Figure 1). After surgery the patients continued with lumbar and irradiated pain. Because of the suspicion of radicular fibrosis, the patient underwent a Magnetic Resonance Imaging (MRI) (Figure 2). The disc degeneration in the L4 - L5 and L5 - S1 levels was considered the aetiology of pain. The symptoms assumed to a failed back surgery and she was remitted to the pain unit. In 2006 when she was admitted to our unit, she has back and irradiated pain. Physical and neurological examination found no abnormalities. Plain radiographs showed degenerative disc disease in L4 - L5 and L5 - S1 levels. A MRI was performed and revealed an inflated focal lesion with a 1.5 cm diameter located in the right lamina of L4, heterogenic, isointensive relationship to the muscle that through contrast administration presents a discrete highlight signs of paravertebral muscles oedema, adjacent to the lesion with notable contrast (Figure 3). Technetium bone scan showing increased focal uptake in the right side of the L4 - L5 level (Figure 4). Before surgery a computed tomography (CT) was performed and showed a well limited expansible luteous lesion in the inferior right lamina of L4 vertebra (Figure 5). Routine laboratory examinations were within normal limits. In a retrospective way, little alterations of the signal in MRI can be seen previous to the appearance of the tumour (Figure 2). Posterior approached was performed with complete excision of tumour. Simultaneously a posteroalateral fusion with pedicular screws was performed. Pathologic examination of surgical specimen from patient revealed osteoblastoma (Figure 6). After the surgery the symptoms were relieved.

3. Discussion

Osteoblastoma is a uncommon neoplasm that accounts for approximately 3% of benign and 1% of all primary
Figure 1. Sagittal T2 weighted MRI. Signs of posterocentral slipped disc protrude at the L5 - S1 level in the year 2003.

Figure 2. Axial T2 weighted MRI showing, surgical changes in L5 - S1 level (a) and slight high signal intensity in the facet and lamina of the L4 vertebra on the right side (b). Yellow arrow (where it wasn’t noticed or found important). Year 2004.

Figure 3. Axial T2 MRI (year 2006) showing expansive lesion and anormal intensity changes in the L4 - L5 right facet. This lesion is heterogenic, isointensive relationship to the muscle that through contrast administration presents a discrete highlight signs of paravertebral muscles oedema, adjacent to the lesion with notable contrast.

Figure 4. Increase focal uptake in bone scan at the L4 - L5 right level.

Figure 5. CT showing well-defined litic lesion parcial calcified matrix with a 1.5 cm diameter located in the right lamina of L4 and that it is associated with a notable sclerosis and periostotic enlargement of the adjacent bones structures.
4. Conclusions

We report a rare case of spinal osteoblastoma after surgery in adjacent vertebral level. The osteoblastoma mimic a syndrome of failed back surgery which can warn people that a new disease (such as a tumor in this case), irrelevant to the original one, may happen simultaneously even if the original one has been successfully treated and should be differentiated from the previous disease or surgical failure and complications.

5. References


