Reply to “Presumptive Late-Onset Ankylosing Spondylitis Simulating Osteoblastic Skeletal Metastasis in a Patient With a History of Prostate Carcinoma: A Diagnostic Challenge”

To the Editor,

This is an addendum to a case report that we published in the December 2015 issue of the *Journal of Chiropractic Medicine*.¹ This case reported on a 67-year-old man who presented to a chiropractic clinic for treatment of lower back pain but who also had a history of prostate carcinoma. Subsequent imaging examination with nuclear medicine bone scanning revealed a sclerotic pedicle at T12 with increased uptake of radiopharmaceuticals at this vertebral level, findings highly suggestive of osteoblastic skeletal metastasis. Further evaluation revealed that the bone sclerosis was, however, not the result of skeletal metastasis but was more consistent with a seronegative spondyloarthritis such as ankylosing spondylitis.

Most recently, the patient in this case underwent further diagnostic testing, including an arthritic profile as well as a follow-up computed tomography (CT) evaluation. The laboratory results were negative for human leukocyte antigen (HLA)-B27, cross-reactive protein, and erythrocyte sedimentation rate, effectively ruling out inflammatory spondyloarthritis. Imaging revealed further osteosclerosis extending throughout the vertebral body, spinous process, and bilateral pedicles of T12 (Figs 1 and 2). Laboratory analysis also revealed elevated bone alkaline phosphatase (169 U/L; normal range, 30–110 U/L), indicating increased osteoblastic activity. Follow-up prostate specific antigen testing was normal. On the basis of these findings, and in ruling out both late-stage ankylosing spondylitis and osteoblastic skeletal metastasis, the patient was diagnosed with Paget disease. If accurate, this diagnosis clarifies the tibial and other pelvic findings on the patient's previous nuclear medicine bone scan.¹ The patient is currently under the care of his primary care physician, and a follow-up magnetic resonance imaging examination is to be scheduled.

Paget disease has been referred to as a “great imitator of bone diseases.”² Often this can lead to a delay in diagnosis. In fact, an average lag time of 4 to 9 years between the first

symptoms and diagnosis of the disease has been reported.^{3,4} In our case, the patient underwent several diagnostic imaging and laboratory investigations and consulted numerous medical specialists over a span of 4 years before being diagnosed with Paget disease.

Besides Paget disease, what also made this case diagnostically challenging for the various health care providers involved was the patient's history of prostate carcinoma, as well as his original radiographic findings of bilateral ankylosis involving the lower two-thirds of the sacroiliac joints and concentric narrowing with axial migration of the hip joints,¹ radiographic findings that are consistent with inflammatory spondyloarthritis. This multitude of co-morbidities and clinical findings illustrates the diagnostic uncertainty of certain cases in “real-life” clinical practice. Although Paget disease is the most plausible diagnosis in the current case, it is not definitive, as the patient's radiographic findings fail to demonstrate all of the classic or typical findings associated with this disease. Moreover, access to necessary diagnostic testing and cooperation of the health care providers involved in this case was not ideal. In spite of this, the patient was pleased with the comprehensive follow-up undertaken by the treating doctor of chiropractic and to finally have a diagnosis. He was also relieved that the diagnosis was not metastatic prostate carcinoma.

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Fig 1. Coronal (A) and sagittal (B) CT images of the thoracolumbar spine revealing extensive osteosclerosis of the vertebral body of T12 (asterisk), giving the appearance of an “ivory vertebra.” There is also a suggestion of slight vertebral body enlargement.

REFERENCES

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Fig 2. Axial CT images (A, B) showing osteoblastic activity combined with osteolytic regions that have obliterated the normal trabecular pattern within the vertebral body and pedicles of T12.