CASE REPORTS

Multifocal Tuberculosis Presenting as Metastatic Tumour

Nitin M Rathod¹, Deepak Patkar², Amit Choudhari³, P Revanth⁴

Abstract
A middle aged female presented with multiple lesions in the bone mimicking as multiple metastasis. In such cases detection of lesion should be confirmed by soft tissue diagnosis and appropriate culture. In our case, the lesions were responsive to anti-tuberculous treatment.

Case Report
A 50 years old lady came with complaints of back-ache since one year, which had worsened in the past 2 months. The pain was dull aching, localized to her lower back region and non-radiating. There was no tingling or numbness in the limbs, nor any bladder or bowel disturbances. Patient gave no history of weight loss, fever, cough or any other mass lesion in the body. There was no history of diabetes, hypertension or ischemic heart disease. There was no history of Koch’s or Kochs contact.

General examination of the patient did not reveal any significant abnormality except for localised tenderness over the dorso-lumbar spine. Patient was afebrile. Her blood pressure was 130/80 mm Hg. She was conscious, oriented to time, place and person, and no focal neurological deficit was seen. She was being treated by 5 different orthopaedic consultants over the past one year with analgesic and muscle relaxants with temporary relief. Plain X-ray of her dorsal spine did not reveal any pathology. Her vitamin-D levels were marginally low, which had been corrected but still there was no improvement in her pain symptoms.

Investigations revealed:
- Hb - 11.4 gm/dl, WBC - 8200/ cumm, ESR -110/1 hr, CRP- 241 mcg/L, procalcitonin - 0.85 (mild risk for bacterial infection), Creatinine 0.7 mg/ dl, Alkaline Phosphate 125 IU/L (N- 35 – 104), Uric acid 5.4 mg%, Calcium 9.3 mg/dl, Phosphorus 4.7 mg/dl. BT/CT/ PT/ INR were normal. T3/T4/TSH were normal. Thyroglobulin was 230 ng/ml (N-1.6 – 60 ng/ml).
- Serum Protein Electrophoresis showed no evidence of Myeloma.
- 2-D echo examination showed LVEF of 60 %, good biventricular systolic function. No regional wall motion abnormality noted.
- Viral markers were negative.

The chest x-ray showed mild prominence of vascular markings, otherwise the rest of the lung fields were normal. Considering unbearable localised back pain, high ESR with high CRP and normal X-ray, MRI dorso-lumbar spine was advised to evaluate the aetiology of back pain.

MRI of the dorso-lumbar spine revealed altered marrow signals in D3, D10, D12 vertebrae, D3 and D10 vertebral body and left half of the left pedicle and spinous process of the D12 vertebrae (Figure 1). The above findings showed possibility of a neoplastic process such as metastasis.

To evaluate further a PET scan of the whole body was done which showed FDG avid lesions in the left lobe of thyroid, nodes in the right sub-pectoral region as well as in the mediastinum with multiple FDG avid osseous lesions. Small nodules are seen in the left lobe of the thyroid measuring 20x12 mm. Osseous lesions in the left femoral shaft and in the ribs (Figure 2). Lesions were seen in D3, D10/12 vertebral bodies and spinous process of D12. Anterior mediastinal nodes of 21 mm size were also noted. The possibility of a thyroid primary, (follicular probably with metastatic lung parenchyma and osseous lesions) was given.

FNAC of the left lobe of thyroid was performed to further gain knowledge into the disease process. 15 smears of FNAC of left lobe of thyroid showed colloid granulation tissue which suggested organisation of an inflammatory process. Repeat tru-cut biopsy of the left thyroid lesion was also performed which also showed...
FNAC and Tru-cut biopsy findings from the thyroid gland and femoral bone, a trial of Anti Koch therapy (AKT) was given to patient over 2 months under medical supervision. Patient was taking sedative analgesics (Tramadol) along with other anti-inflammatory drugs for relief of pain, within 15 days the requirement of analgesics reduced to half and after 2 months of AKT, she didn’t require any analgesic. Patient’s clinical parameter as well as lab reports improved. Her ESR and CRP which was 110 mm and 241 mcg/l reduced to 37 mm and 53 mcg/l respectively.

Discussion

Tuberculosis of the bone is a well-recognized clinical condition that can be diagnosed and managed by physicians and orthopaedic surgeons, often with an excellent outcome. Tuberculosis with multiple-bone involvement is extremely rare in immunocompetent patients and in those with normal pulmonary findings. Nevertheless, since patients with multifocal skeletal tuberculosis may present with vague multiple somatic symptoms, Physician and orthopaedic surgeons should maintain a high degree of suspicion in order to diagnose this condition. Multiple disease processes such as infection, autoimmune diseases, granulomatous processes as well as metabolic diseases like hyperparathyroidism may cause appearance of multiple FDG avid lesions at multiple sites on PET scan. In case of infective process some appropriate culture should also be performed to grow organisms responsible for diffuse lesion. This case report underlies the need for specific tissue diagnosis.

Conclusion

The detection of multiple lesions on PET does not always indicate a neoplastic process. The detection of these lesions should be followed by some form of tissue diagnosis to confirm the real nature of lesion.

References