Sarcoidosis is a benign systemic disease that involves several organ systems. We present a case of sarcoidosis presenting with lytic bone lesions and pulmonary involvement.

**PATIENT DESCRIPTION**

A 53 year old woman was admitted with a 2 month history of right-sided headache. Elevated blood pressure up to 180/98 was observed on several occasions and essential hypertension was diagnosed. Therapy with valsartan was initiated. Head computed tomography revealed skull lytic lesions [Figure A]. No weight loss or anorexia was reported. Her past medical history was remarkable for osteoporosis, which was treated with calcium and vitamin D. She was admitted for investigation.

Physical examination was normal. Her blood pressure was 106/70 mmHg, heart rate 80 beats per minute and temperature 36.7°C. There was no tenderness while palpating the skull. Blood tests were normal, including complete blood count, wide chemistry, protein electrophoresis, and erythrocyte sedimentation rate. Urine was negative for Bence-Jones proteins.

Skeletal X-rays of legs, arms, forearms, hands, spine and pelvis were normal. Bone marrow biopsy showed normal hematopoiesis. Bone scan showed slightly increased uptake in the right parietal posterior aspect of the skull. Abdominal and thoracic CT showed mediastinal and hilar lymphadenopathy, with 1.5 cm lymph nodes [Figure B], small bilateral lung nodules [Figure C] and small hypodense multiple nodules in the spleen [Figure D]. Blood angiotensin-converting enzyme level was normal (45 U/L). Spirometry showed air flow rates in the lower normal limit (forced expiratory volume in the first second 80%), improving with bronchodilators.

Fiberoptic bronchoscopy showed a normal trachea-bronchial tree. Biopsy was obtained from the right upper and lower lobes, and histopathological examination revealed non-necrotizing granuloma with multi-nuclear giant cells and no fungi or acid-fast bacilli, findings compatible with sarcoidosis. Electrocardiogram was normal, and ophthalmologic examination – both slit lamp and ophthalmoscopy – showed no evidence of ocular involvement. Sarcoidosis was confirmed and the patient is being feeling well. No treatment was indicated.

**COMMENT**

Sarcoidosis is a systemic granulomatous disease of unknown etiology, affecting mainly the lungs, lymph nodes, eyes and skin. Skeletal involvement is reported to occur in 1–14% of patients [1,2]. The...
typical involvement is cystoid osteitis, an asymptomatic lesion localized to the small bones of the hands and feet [1,3]. Other rare lesions that have been described include lytic bone lesions, permeative lesions showing progressive "tunneling" with remodeling of trabecular and cortical architecture, and destructive lesions with rapid progression resulting in pathological bone fractures [3].

A Medline search for "sarcoidosis lytic bone lesion" revealed only nine articles reporting only 34 patients with bone involvement in sarcoidosis. Of these patients, lytic lesions were described in 29 patients (85%) [3-5]. Our patient is the 30th to be reported.

Of these patients, lytic lesions were reported by Yona et al. [4] and Oven et al [5]. All the described patients had been diagnosed after a bone biopsy was obtained, showing the typical non-caseating granulomas. Our patient is the first to be diagnosed without a biopsy, and continues to be symptom free after 18 months follow-up.

Since bone lesions may remain asymptomatic for years and may be discovered incidentally, the exact nature, distribution and progression of lesions remain unknown. Osseous sarcoidosis responds poorly to corticosteroids as well as to other treatments used to treat the illness. Symptomatic relief may be achieved by colchicine and non-steroidal anti-inflammatory drugs. Chloroquine and hydroxychloroquine were found to be effective [1].

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**References**

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**Capsule**

**Maintenance peg-interferon no extra help in HCV non-responders**

Shiffman and co-authors found that in patients with hepatitis C virus (HCV) infection who don’t have sustained viral suppression with standard-dose pegylated interferon (PEG IFN) alfa-2a, there is no benefit to be gained from low dose maintenance therapy. A secondary analysis of data was performed on 764 patients with bridging fibrosis or cirrhosis who had not responded to 180 µg/week of PEG IFN alfa-2a plus ribavirin in a randomized trial. The non-responders were re-randomized to receive either 90 µg/week of PEG IFN alfa-2a as maintenance therapy (without ribavirin) or to stop treatment and act as controls during the 3.5 year maintenance phase. Overall, compared to the 20 week non-responders, the patients with relapse or breakthrough had significantly fewer clinical outcomes regardless of whether they received maintenance therapy or not. Among the 88 patients with breakthrough/relapse who were re-randomized to maintenance therapy, 30 patients did manage to achieve and maintain HCV RNA suppression, but they had no significant reduction in clinical outcomes. In the other 58, serum HCV RNA increased significantly.

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**Capsule**

**Kidney transplants reduce heart failure risk, but to a lesser extent in obese patients**

Lentine et al. analyzed total and new-onset heart failure diagnoses in 67,591 Medicare-insured adults who were listed for kidney transplant between 1995 and 2004. They compared heart failure risks in patients who received transplants versus those with extended waiting times, and in obese and morbidly obese patients versus normal weight patients. Of the total cohort (36,433 candidates), 54% received a kidney transplant at a median of 411 days after listing. In these patients, the incidence of new-onset heart failure was 36.1% at 3 years after transplant. The prevalence of heart failure at 3 years was lower among patients with normal body mass index at baseline. The reduction in risk of heart failure at 3 years was largest for normal-weight candidates who received living donor transplants (a 69% risk reduction). The 3 year risk reduction for deceased donor transplants ranged from 54% in normal-weight recipients to 32% in morbidly obese recipients.

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