Clinical Images

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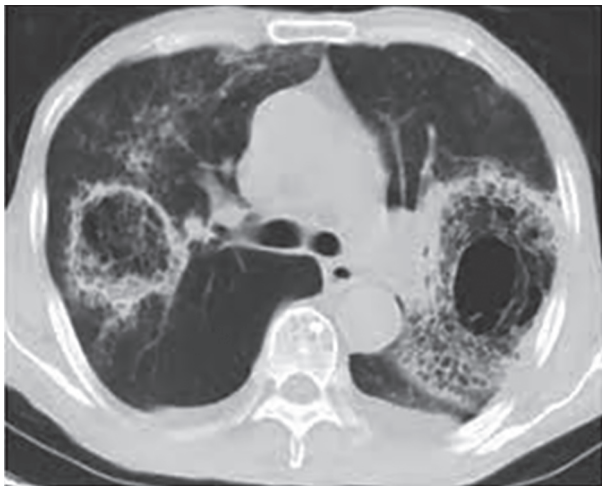
Figure 1: Background

This 42-year-old male, a known case of human immunodeficiency virus infection and acquired immunodeficiency syndrome on antiretroviral therapy, presented to our department with the complaint of fever, cough, and increasing shortness of breath over the last 2 weeks. On examination, there was hypoxemia (peripheral arterial oxygen saturation of 82% on room air) with a few crackles in both lung bases. Computerized tomography (CT) of the chest revealed the area of central ground-glass opacity that was surrounded by a denser consolidation of a crescentic shape, suggesting "Reversed halo sign" (Fig. 1). Bronchoalveolar lavage and bronchoscopy guided biopsy showed lung tissue filled with colonies of broad, nonseptate right-angled branching fungal hyphae. A diagnosis of pulmonary mucormycosis was done on histopathology. There was no evidence of other common opportunistic infections. He had been diagnosed as a case of pulmonary Mucormycosis and started on liposomal amphotericin B; however, we lost the patient within the next few days despite our best effort.



The reversed halo sign or atoll sign was first described on high-resolution CT scan of the chest as a specific radiological sign for cryptogenic organizing pneumonia. However, this sign has been reported in association with a large number of pulmonary diseases, which include invasive pulmonary fungal infections, tuberculosis, pneumocystis pneumonia, community-acquired pneumonia, and granulomatosis with polyangitis and sarcoidosis. It has also been reported in pulmonary neoplasms, infarction, and following radiotherapy and radiofrequency ablation for pulmonary malignancies.

Final diagnosis: Reversed halo sign of pulmonary Mucormycosis

(**Acknowledgment:** Dr. Nandini Chatterjee, Professor, Department of Internal Medicine, IPGMER and SSKM Hospital, Kolkata)

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Figure 2: Background

A 17-year-old female patient complained of some nonspecific symptoms along with a rash over her cheek. On examination, a hypopigmented and slightly erythematous patch was noted over her right cheek (Fig. 2). There was also another hypopigmented patch over her right hand, and the right ulnar nerve was tender and thickened. The histopathology from a lesion revealed granulomas packed with epitheloid cells, suggesting tuberculoid leprosy.

Hypopigmentary disorder is very commonly encountered in day-to-day practice, and they often have a significant psychological impact. Leprosy is commonly associated with hypopigmented-to-erythematous patches and plaques with variable sensory impairment. Macular hypopigmented lesions are very commonly seen throughout the spectrum of leprosy ranging from indeterminate to the lepromatous pole. They are mainly seen on the face, knees and elbows, buttock, and ears, with relative sparing of palms and the

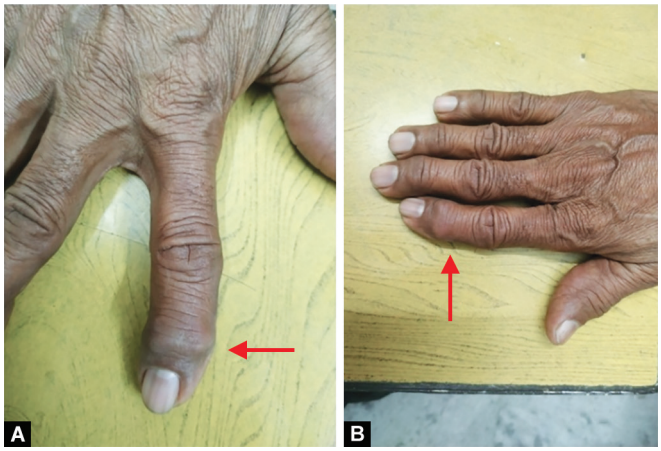
soles, and midline of the back and hairy regions of the body like scalp, axillae, and genitals. Classical leprosy lesions are ill- to well-defined dry lesions with sparse hair and decreased sweating. Lesions are usually hypoesthetic. Peripheral nerves are often enlarged. In the Indian subcontinent, a sensory examination of a hypopigmented patch is mandatory. However, one should remember that leprosy is a great mimic and may have variable manifestations. The differentials include pityriasis alba, pityriasis versicolor, post-kala-azar dermal leishmaniasis, and hypopigmented mycosis fungoides.

Final diagnosis: Hypopigmented patch of tuberculoid leprosy

(**Acknowledgment:** Dr. Nandini Chatterjee, Professor, Department of Internal Medicine, IPGMER and SSKM Hospital, Kolkata)

Figure 3: Background

A 57-year-old gentleman presented with a gradually progressive lower back pain that was aggravated while climbing stairs for the last 3 years. The patient also gave a history of pain in both the hands for the same duration. There was no morning stiffness, and the pain mainly aggravated on any form of the activity. On examination, two bony swellings over the distal interphalangeal (DIP) joint of the right index finger were noted, suggestive of Heberden's nodes (HNs) (Fig. 3). Radiographic features of the hand revealed narrowing of joint spaces and osteophyte formation in the DIP joint of the right index finger.



HNs are firm nodular swellings over the dorsal and lateral aspect of the DIP joints of the fingers (usually the index and middle fingers). This deformity is caused by osteophyte formation along with synovial thickening in the margin of joint affected by osteoarthritis, and they are more commonly seen in the elderly. Though they are considered to be the characteristic feature of the interphalangeal osteoarthritis, their presence often indicates a systemic predisposition to generalized osteoarthritis. HNs do not cause any significant functional problem per se, except mild to moderate stiffness and pain. Therefore, surgical intervention is not indicated usually. The patient in our case was put on nonsteroidal anti-inflammatory drugs and had symptomatic relief.

Final diagnosis: Heberden's nodes of osteoarthritis

(**Acknowledgment:** Dr. Atanu Chandra, Assistant Professor, Department of Internal Medicine, RG Kar Medical College and Hospital, Kolkata)

Figure 4: Background

A 46-year-old male patient without any symptoms came to our outpatient department for seeking an opinion regarding some abnormalities in his chest radiography. The chest X-ray revealed features of superior mediastinal widening (Fig. 4A). CT angiography showed significant dilatation of the lumen of both ascending and descending thoracic aorta (Fig. 4B).

Thoracic aortic aneurysms (TAA) represent aneurysmal dilatation of the ascending thoracic aorta, the aortic arch, or the descending thoracic aorta, or a combination of these locations. The term aneurysm is used when the axial diameter is greater than 5.0 cm for the ascending aorta and greater than 4.0 cm for the descending aorta. The most common location for TAA is the ascending aorta, followed by the descending aorta. TAAs are less common than aneurysms of the abdominal aorta. It is the most common disease of the thoracic aorta requiring surgical treatment. Better imaging technology has led to the earlier recognition of acute aortic dissection, allowing the identification of more patients with complex conditions who are candidates for surgery. In patients with aortic aneurysm, aortic dissection is the most feared catastrophic event. Rupture of a TAA is more frequent than abdominal aortic rupture

Final diagnosis: Thoracic aortic aneurysm (TAA)

(**Acknowledgment:** Dr. Nandini Chatterjee, Professor, Department of Internal Medicine, IPGMER and SSKM Hospital, Kolkata)