Answer: Pulmonary complications are common.

MCQ Explanation:

Blastomycosis, an infection caused by *Blastomyces dermatitidis*, is endemic in North America, especially in the Great Lake region, Mississippi, and Ohio River basin.\(^1\) *B. dermatitidis* grows in soil and is usually acquired by inhalation. Skin involvement is seen in approximately 20% of cases and is the second most common site of infection after the lungs.\(^2\) Forty to eighty percent of cutaneous lesions originate from a primary pulmonary source.\(^1\) These lesions are characterized as verrucous and/or ulcerated and they often spread centrifugally, typically enlarging up to many centimeters in diameter.\(^1\) In contrast, primary cutaneous inoculation of blastomycosis is less common, presenting with papules or pustules at the site of inoculation with associated locoregional adenopathies.\(^1\) The differential diagnosis for cutaneous blastomycosis includes scrofuloderma, lupus vulgaris, squamous cell carcinoma, nocardiosis, syphilis, granuloma inguinale, other deep fungal infections, and pyoderma gangrenosum.\(^1\)

Diagnosis is made by identification of characteristic broad-based budding yeast in tissue or sputum, and/or culture, with culture requiring up 2-4 weeks of incubation. Serology has low sensitivity and specificity. Itraconazole is the first line treatment for mild-to-moderate disseminated blastomycosis and is generally continued for 6-12 months.\(^3\) If the central nervous system is involved, treatment regimen consists of intravenous lipid formulation of amphotericin B for 4-6 weeks, followed by an oral azole (fluconazole, itraconazole, or voriconazole) for at least 12 months. Prognosis is generally favorable with a 90% cure rate.\(^1\)

In our patient, a diagnosis of cutaneous blastomycosis was made based on broad-based budding yeasts seen on pathology of a biopsied specimen. Chest x-ray revealed a right lower lobe nodule measuring 1.9 x 1.7 cm. Urine blastomyces antigen was negative. The patient was treated with oral itraconazole for 7 months with resolution of the left facial lesion and pulmonary nodule.

References:

Legends:
Figure 1. A verrucoid nodule on left zygoma.

Figure 2. Pathology of the biopsied specimen demonstrating a broad-based budding spore (Grocott's methenamine silver stain

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