Digital acrometastasis: an unusual first presentation of an occult lung cancer

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A 57-year-old Caucasian man with a 32 pack-year history of smoking presented to the primary care clinic with a 2-week history of left index finger pain, redness, and swelling after sustaining a minor injury while closing his car door. Physical examination revealed a blackish discoloration of the skin. An X-ray of his left hand showed complete demineralization of the distal phalanx of the left index finger (Figure 1). The pain did not respond to NSAIDS, narcotics, and antibiotics. He subsequently underwent partial amputation of the finger. Pathology from the surgical specimen revealed a “poorly differentiated metastatic small-cell carcinoma” (Figure 2). He denied any dyspnea, cough, fever, night sweats, or loss of weight or appetite. The results of a computerized tomography scan of his thorax (Figure 3), abdomen, and pelvis revealed a large right lower lobe lung mass of 6.2 cm × 4.2 cm adjacent to the right lower lobe bronchus that was consistent with lung cancer associated with pulmonary, hepatic, nodal, and skeletal metastasis. Magnetic resonance imaging of the brain showed multiple metastatic lesions throughout the brain, including the cerebellum. An MRI of the spine showed extensive metastatic lesions involving the thoracic vertebrae, T4–T12, and the lumbar vertebra, L2. Given the extensive metastases and poor prognosis, the patient chose hospice care and palliative services.

Discussion

Digital acrometastases represent only 0.1% of all skeletal metastases.1 They have been described with various malignancies, including breast, gastrointestinal tract, head and neck, and small-cell and non–small-cell lung carcinomas.1,2 Metastases to the hand are most commonly caused by bronchogenic carcinomas,1-7 whereas foot metastases are seen with tumors originating in the gastrointestinal or genitourinary tracts.6,7 The most commonly involved bones are the phalanges in the hand and the tarsal bones in the foot.7,8

Acrometastases account for about 1 out of 500 lung cancers that present with bony metastases.2 Prognosis is grim, with a mean survival of 3–6 months after presentation.1,2 Although acrometastasis from lung cancer itself is rare, occult lung cancer presenting as metastasis to the finger is even more unusual.
The presentation of digital metastatic lesions may vary. As seen in this case, patients may report trauma to the affected finger. It may appear to be infected with erythema, swelling, and tenderness. The overlying skin may even bleed or ulcerate. These lesions are often initially mistaken for more benign processes, such as infection, trauma, inflammatory arthritis, osteomyelitis, or gout. However, persistent symptoms with no response to conservative management as seen in this patient often invokes the suspicion.

Given the diagnostic challenge and bleak prognosis, clinicians need to be mindful of this rare diagnosis and pay close attention to subtleties on imaging. Pathological confirmation is ultimately essential. Treatment is largely palliative because of the poor prognosis.

References