Severe bleeding following biopsy of an isolated endobronchial ulcer

Sir,

Endobronchial tuberculosis is a well-recognized clinical entity; however, it is uncommon without pulmonary parenchymal or mediastinal lymph node involvement.\[1\] Endobronchial tuberculosis is further classified as exudative, granular and ulcerative.\[2\] Herein, we report a rare presentation of tuberculosis manifesting as a solitary ulcer in the right main bronchus. Endobronchial biopsy of this ulcer resulted in severe bleeding.

A 67-year-old previously healthy woman was evaluated for dry cough of 3 weeks’ duration. There was no hemoptysis, chest pain or fever. She experienced anorexia and weight loss of 2 kg during the previous month. She denied the use of substance of abuse or smoking. Physical examination was unremarkable. A chest radiograph did not reveal any abnormality. A contrast-enhanced computed tomography of the thorax showed a defect in the anterior wall of the right main bronchus [Figure 1a and b, arrow]. The pulmonary parenchyma was normal, and there was no mediastinal or hilar lymphadenopathy. Flexible bronchoscopy showed a deep ulcer with a yellowish flattened base in the anterior wall of the right main bronchus [Figure 1c and Supplemental Video]. Bronchial washings were obtained without any complications. Initially, we performed EBB from the edge of the lesion and base of the lesion. However, the third attempt at biopsy from the ulcer base resulted in severe bleeding. The bleed was controlled after 20 minutes of suctioning, instillation of ice-cold saline, and topical adrenaline (1:10000 dilution). Histopathological examination showed lymphocytic infiltration and smear for acid-fast bacilli was positive. Xpert MTB/RIF of the tissue specimen showed Mycobacterium tuberculosis and rifampin resistance was not detected. Bronchial washing was negative for tuberculosis and fungus. We managed the patient with anti-tuberculosis therapy for 6 months. She had a clinical response to treatment but was unwilling for a repeat bronchoscopic examination. She is currently asymptomatic after 2 years of completion of treatment, and there was no recurrence of bleeding during the follow-up.

Endobronchial or tracheal ulcerations are uncommon manifestations of several infectious and non-infectious diseases. In immunosuppressed individuals, endobronchial fungal diseases are an important consideration.\[3\] However, tuberculosis continues to be the most frequently reported cause of ulceration in high-endemic regions. In general, endobronchial tuberculosis presents with multiple endobronchial lesions, and some of which can be ulcerative.\[4\] Erosion of the bronchial wall by an underlying mediastinal lymph node can also result in the appearance of an endobronchial ulcer. However, in the index case, there was no lymph node enlargement. Severe bleeding following EBB, though uncommon, can be potentially fatal.\[5,6\] In the index case, our attempts to biopsy the lesion probably breached the thin layer separating the vessel from the bronchial lumen, resulting in severe bleeding. The anatomic location of the ulcer (beneath which the right inferior pulmonary vein would be expected) and the depth of the ulcer should have deterred us from obtaining a biopsy. Alternatively, performing a bronchial washing and Xpert MTB/RIF would have helped achieve a diagnosis.

In conclusion, tuberculosis can rarely present as an isolated endobronchial ulcer. Biopsies from endobronchial lesions and ulcers should be carefully performed to avoid serious complications, keeping in mind the local anatomy.
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