Sir,
There are rare cases in which metastatic malignancies are seen to be associated with an infectious pathology. However, in developing and underdeveloped countries, these cases are seen at a relatively higher frequency. There are occasional case reports where metastatic malignancies are found to be associated with infectious diseases, especially tuberculosis.[1] Here, we present a case of metastatic carcinoma in the lung coexisting with tuberculosis.

The patient was a 38-year-old male with a biopsy diagnosis of transitional cell carcinoma involving the nose, paranasal sinus, and nasopharynx. The patient was referred to our institute with shortness of breath and hemoptysis for 15 days, prior to his presentation. Computed tomography (CT) scan of the chest revealed multiple mass lesions in both the lungs and the possibility of metastatic lesions was entertained.

CT-guided fine-needle aspiration cytology (FNAC) smears from the mass lesions in the lung showed tumor cells in clusters as well as in a dispersed population. There were two cell populations predominantly showing clusters and dispersed population of round to oval cells with coarse chromatin, prominent nucleoli, and a moderate amount of cytoplasm [Figure 1a]. Many of the cells showed vacuolated cytoplasm. Another population of cells showed predominantly spindle cell morphology with similar chromatin architecture. The background showed scattered alveolar macrophages. In addition, there were occasional epithelioid cell granulomas [Figure 1b] and collection of epithelioid histiocytes [Figure 1c]. The Giemsa stained smear was destained and restained with Ziehl-Neelsen stain to demonstrate the presence of acid-fast bacilli [Figure 1d].

This patient had multiple metastases in the lung that showed cytological features of malignancy (carcinoma). We have access to the report of the primary tumor in the paranasal sinus (transitional cell carcinoma). However, unfortunately, we could not retrieve the slides from the patient. The lung FNAC slides showed unequivocal malignancies, along with tuberculosis.

There are a few case reports of malignancies coexisting with tuberculosis in different settings including metastatic squamous cell carcinoma in the lymph node with coexisting tuberculosis,[1] coexistence of breast cancer with tuberculosis in the breast and axillary lymph nodes,[2,3] and coexistence with bronchogenic carcinoma and non-Hodgkin’s lymphoma.[4] A review of the literature reveals that deterioration of immunity due to local or systemic effects of the tumor itself and/or administered chemotherapeutics or radiotherapy may play a role in the reactivation of tuberculosis, increasing the morbidity and mortality in patients with various malignancies.[4] So, in countries with a high prevalence of tuberculosis such as India, a possibility of tuberculosis should always be considered in malignancies or metastatic malignancies in the lymph node and lungs and Ziehl-Neelsen stain should be done if there is any indirect evidence of tuberculosis.

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Conflicts of interest
There are no conflicts of interest.
Sir,

Primary pancreatic hydatid cyst is a rare entity; the presentation as an asymptomatic pancreatic space-occupying lesion is even rarer. Caused by Echinococcus granulosus, the disease is prevalent in the Mediterranean region, Africa, South America, Australia, and the Middle East. We report two cases of pancreatic hydatid cyst that presented as pancreatic mass. The first case was of a 48-year-old man who was diagnosed with pancreatic space-occupying lesion since last 10 years, and was kept on a follow-up. The patient was asymptomatic. Ultrasound showed a pancreatic cyst suggestive of infective etiology. Subsequently, an endoscopic ultrasound (EUS)-guided fine-needle aspiration (FNA) was done. The second case was of a 35-year-old woman who presented with a history of low-grade fever since 2 months, and ultrasound showed a pancreatic cystic mass. Microscopic examination of Giemsa stained smear of both the cases in low power examination showed a necrotic background with dispersed laminated membranes [Figures 1a and b]. On careful evaluation on higher power, there were hooklets and scolices. Scolices were seen with attached two rows of hooklets [Figure 1c]. These were also appreciated in periodic acid-Schiff (PAS) and Grocott silver stains [Figures 1c and d, 2a and b]. Additionally, Ziehl-Neelsen (ZN) and PAS stain tests were done to rule out the possibility of tuberculosis and any other fungal infection. A diagnosis of primary hydatid cyst of pancreas was given.

There are only two cases of cytological diagnosis of hydatid cyst in pancreas reported in indexed journals. We report these two cases to highlight the importance of EUS-guided FNAC in diagnosing infective cystic lesion that mimic a neoplastic process otherwise.

Hydatid cyst is an infective disease of humans and animals seen more commonly in some specific geographic regions of the world. The primary route of human infection is the ingestion of E. granulosus eggs through consumption of vegetables that are contaminated with dog feces. While liver involvement is the most common manifestation, pancreatic hydatid cyst has been reported in 0.25-0.75% of the cases.[1] The head of the pancreas is the most common location (57%), followed by the corpus (24%) and the tail (19%).[2,3] Possible sources of infestation include hematogenous dissemination, local spread via pancreaticobiliary ducts, and peripancreatic lymphatic invasion.[2,3]

Preoperative diagnosis of pancreatic hydatid cyst is difficult as it may be mistaken for pseudocysts, cystadenocarcinoma, and congenital or post-traumatic cysts.[4] Hydatid cyst should be considered a differential diagnosis of pancreatic cystic lesions.

References
1. Barwad A, Gowda KK, Dey P. Co-existent of tuberculosis and squamous cell carcinoma in a lymph node diagnosed by fine needle aspiration cytology. Cytopathology 2012;23:276-7.
2. Akbulut S, Sogutcu N, Yagmur Y. Coexistence of breast cancer and tuberculosis in axillary lymph nodes: A case report and literature review. Breast Cancer Res Treat 2011;130:1037-42.
3. Baslaim MM, Al-Amoudi SA, Al-Ghandi MA, Ashour AS, Al-Numani TS. Case report: Breast cancer associated with contralateral tuberculosis of axillary lymph nodes. World J Surg Oncol 2013;11:43.
4. Karnak D, Kayacan O, Beder S. Reactivation of pulmonary tuberculosis in malignancy. Tumori 2002;88:251-4.