Correspondence

Primary hyperparathyroidism presenting with cough and dyspnea

To the editor: Primary hyperparathyroidism (PHPT) is an occasionally encountered disease caused by parathyroid adenoma, hyperplasia or cancer which secretes much parathyroid hormone leading to high serum calcium and low serum phosphorus level. The disease mainly involves bones and urinary system. The clinical symptoms such as seldom attacks of lassitude, fatigue, vomiting and calcification in normal tissues are rare. We present a patient with PHPT who developed bilateral metastatic calcification of the lungs, primarily presented with a chronic cough and dyspnea on exertion, as a reminder to clinicians of this possible complication.

A 56-year-old woman presented with cough and dyspnea. The chest CT scan showed multiple, bilateral infiltrates and calcification in the left lung and ventricular wall (Figure 1 A, B). Laboratory results were as follows: an increased serum creatinine level of 108 µmol/L (reference: 44–106 µmol/L), normal calcium level of 2.56 mmol/L (2.25–2.75 mmol/L), abnormal phosphate level of 0.79 mmol/L (0.96–1.62 mmol/L) and an increased parathyroid hormone level of 128 pmol/L (1.1–7.3 pmol/L). Right solid thyroid lesion was found through B ultrasonic imaging, and parathyroid hyperactive adenoma was observed by $^{99m}$Tc-MIBI parathyroid imaging. After the transbronchial lung biopsy, we got the pathological result of the patient that there was numerous calcification in the alveoli and interalveolar septum (Figure 1C). A $^{99m}$Tc-methylene diphosphonate (MDP) whole body scan showed pulmonary uptake mostly (Figure 1D). A diagnosis of metastatic pulmonary calcification (MPC) due to primary hyperparathyroidism was made.

This is an unusual case of MPC in a patient with PHPT, who primarily presented with a chronic cough and dyspnea. It is easily misdiagnosed as pulmonary disease. We should consider the possibility of MPC with calcium deposition in lungs in patients with PHPT.

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Gui Xianhua, Miao Liyun, Cai Hourong and Meng Fanqing
Department of Respiratory Medicine (Gui XH, Miao LY and Cai HR), Department of Pathology (Meng FQ), Affiliated Drum Tower Hospital of Medical School of Nanjing University, Nanjing, Jiangsu 210008, China
Correspondence to: Dr. Miao Liyun, Department of Respiratory Medicine, Affiliated Drum Tower Hospital of Medical School of Nanjing University, Nanjing, Jiangsu 210008, China (Email: liyunmiao462@163.com)

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Figure 1. The imaging manifestations and pathological findings of the patient. A, B: A CT scan section of the chest showing multiple, bilateral infiltrates and calcification in the left lung and ventricular wall. C: Transbronchial lung biopsy specimen showing calcium deposition in the alveoli, alveolar septa (HE, original magnification ×200). D: A $^{99m}$Tc-MDP whole-body scan showing soft-tissue uptake in both lungs.

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