Pulmonary inflammatory myofibroblastic tumor is an uncommon, benign solid tumor of the chest that mostly affects children. We present a 7-year-old body who suffered from cough. The chest radiograph and chest CT showed a rapid growing mass in left upper lobe. Based on histopathologic examination, pulmonary inflammatory myofibroblastic tumor was diagnosed; although rare, it is the most frequent primary lung tumor in childhood.

Key words: Inflammatory myofibroblastic tumor; Inflammatory pseudotumor

CASE REPORT

A 7-year-old boy suffered from productive cough with intermittent fever for days and decreased activity in 2 days before admission. On physical examination, coarse breathing sounds was noted in bilateral lungs. Laboratory investigations showed white blood cell count was 21410 / μl, CRP 24.9 mg/dl.

Chest radiograph demonstrated a large rounded opacified mass lesion in left upper lobe, obscuring the left hilum and left heart border (Fig. 1). Symptoms relieved after antibiotic medication. However, the follow-up chest radiography in 7 days later showed no resolution of the rounded opacity and surprisingly showed rapid growth of the mass (Fig. 2.). Afterward, axial contrast enhanced chest CT scan demonstrated a well defined mass with poor contrast enhancement. The mass showed contiguous to the left heart border (Fig. 3).

Upon surgery, a pulmonary mass measuring 5.3 × 5.5 × 2.0 cm, located in left upper lobe, was resected. The mass was in tan-yellow color and abut the bronchus. Microscopically, the mass was composed of compact fascicular spindle cell proliferation with area of variable myxoid and collagenous fibrous tissue (Fig. 4). The pathological diagnosis was pulmonary inflammatory myofibroblastic tumor. No mediastinal nodes were involved in our case.
Pulmonary inflammatory myofibroblastic tumor is a rare tumor. Diagnosis is usually made after its surgical removal because of nonspecific nature in clinical manifestations and imaging features.

Inflammatory myofibroblastic tumors have been found at different anatomical sites in bronchus, esophagus, mesentery as well as in duodenum [2].

DISCUSSION

Pulmonary inflammatory myofibroblastic tumor is a benign lesion representing a localized cellular proliferation, mainly of plasma cell [3].

Figure 1. Chest radiograph shows a large rounded mass lesion in left upper lobe and obscured the left hilum and left heart border.

Figure 2. 7 days later, follow-up chest radiograph after antibiotic medication, rapid growth of the lung mass is seen.

Figure 3. a. Unenhanced axial CT image reveals a rounded heterogenous mass in left upper lobe. The mass shows contiguous to the left heart border. b. Contrast enhanced axial CT image reveals poor enhancement of the mass and with small septations.
Agressive feature that may mimic neoplasia have been reported, such as vertebral destruction and vascular invasion [1]. Clinical-radiological feature of hypertrophic osteoarthropathy and extraparenchyma involvement-including hilar, mediastinal, and airway invasion has been reported [4]. Radiographically, pulmonary inflammatory myofibroblastic tumor usually appears as a round nodular lesions varying between 0.5 and 36 cm [5], and sometimes resembling of round pneumonia. The right lung and lower lobes are more commonly involved [5]. Cavity formation is rare in pulmonary inflammatory myofibroblastic tumor [6]. Scattered calcifications throughout the mass have been reported in 15% of cases, varying in appearance from mottled, fine flecks to coarse and dense ossifications [1]. Enlarged lymphadenopathy in mediastinum is rare. Seven % hilar or mediastinal adenopathy was noted in one study [1]. MR study revealed the inflammatory myofibroblastic tumor had intermediate signal intensity on T1-weighted images and increased signal intensity on T2-weighted images [1].

In summary, rapidly growing mass in lung is rare in children. However, a rapidly growing lung mass in the peripheral region of the lung in children should remind radiologists of pulmonary inflammatory myofibroblastic tumor. Most of the lesions are well circumscribed on chest radiographs. Pulmonary inflammatory myofibroblastic tumor can be present at any age without no sex predilection. It can appear in any organ, most common in lung. Differential diagnosis of rounded lung mass include the round pneumonia, lung abscess, bronchogenic cyst and metastasis. Because that inflammatory myofibroblastic tumor is rare and biopsy tissue always show inflammatory cells only, it is a diagnostic dilemma for the clinician, pathologist and radiologist. It is difficult to diagnose pulmonary myofibroblastic tumor based on the frozen histopathological examination and especially difficult to distinguish from lymphoma, malignant rhabdomyosacroma and fibrosis. Complete resection of the mass for both diagnosis and treatment is advised. In childhood, when a rounded pulmonary mass in lower lobe is encountered, pulmonary inflammatory myofibroblastic tumor should be considered.

**REFERENCES**

肺部炎性肌纖維性腫瘤：病例報告

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肺部炎性肌纖維腫瘤是一種罕見良性之腫瘤，較常發生於幼童，我們報告一名7歲小孩，於左肺發現一生長快速之圓形腫瘤。手術後，病理報告為罕見之肺部炎性肌纖維瘤。在幼童肺部之良性之腫瘤中，炎性肌纖維瘤為優先考慮之腫瘤。

關鍵詞：炎性肌纖維性腫瘤；炎性腫瘤