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Single pulmonary round mass in a 12-year-old boy

Zacharoula Karabouta, Maria Arampatzi, Fani Athanassiadou-Piperopoulou

2nd Paediatric Department, AHEPA General University Hospital, Thessaloniki, Greece

Correspondence to Dr Zacharoula Karabouta, zkarabouta@yahoo.com, zkarab@med.auth.gr

DESCRIPTION

A 12-year-old boy, previously healthy, was admitted to the paediatric ward. He had a 15-day history of cough and fever. A chest x-ray (CXR) revealed a rounded solid opacity with no air bronchogram at the right upper lobe (RUL) pressing the fissure downwards, consistent with the diagnosis of a round pneumonia (figure 1). Laboratory analysis suggested bacterial infection, and Mantoux test was negative. The patient received intravenous antibiotics and fluids. Because of the atypical radiological features and location of the mass, a chest CT scan was performed confirming a large consolidation anteriorly in the RUL. The course of the disease was uncomplicated. A repeat CXR 2 months later showed areas of persistent stellate atelectasias (figure 2). Round pneumonia, a rounded region of consolidative parenchymal pulmonary infection, is a rare, benign pulmonary infection in children and is usually caused by *Streptococcus pneumoniae*.¹ It particularly occurs in individuals younger than 8 years of age because of underdeveloped pathways of collateral ventilation (pores of Kohn, channels of Lambert), more closely apposed connective tissue septae, smaller alveoli than adolescents and adults, thus limiting the spread of the organism and resulting in a focal round mass seen on radiographs and CTs. Only 20% of round pneumonias contain air bronchograms at initial presentation.² Differential diagnosis includes rare infections (fungi

Figure 2 Repeat chest x-ray 2 months after initial presentation.

and mycobacteria), tumours and congenital anomalies.³ In conclusion, symptoms of cough, fever and a round intrapulmonary mass on CXR in a child most likely represent pneumonia. However, the knowledge of other conditions presenting with a similar radiological picture helps avoidance of misdiagnosis and optimise further imaging, investigations and treatment.

Learning points

- ▶ Round pneumonia is a rare, benign pulmonary infection in children.
- ▶ Round opacities in chest radiographs should be differentiated from other conditions, such as rare infections, tumours and congenital anomalies.

Competing interests None.

Patient consent Obtained.

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Figure 1 Chest x-ray on admission.

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