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THE VALUE OF LUNG ULTRASONOGRAPHY IN A CHILD WITH PNEUMONIA

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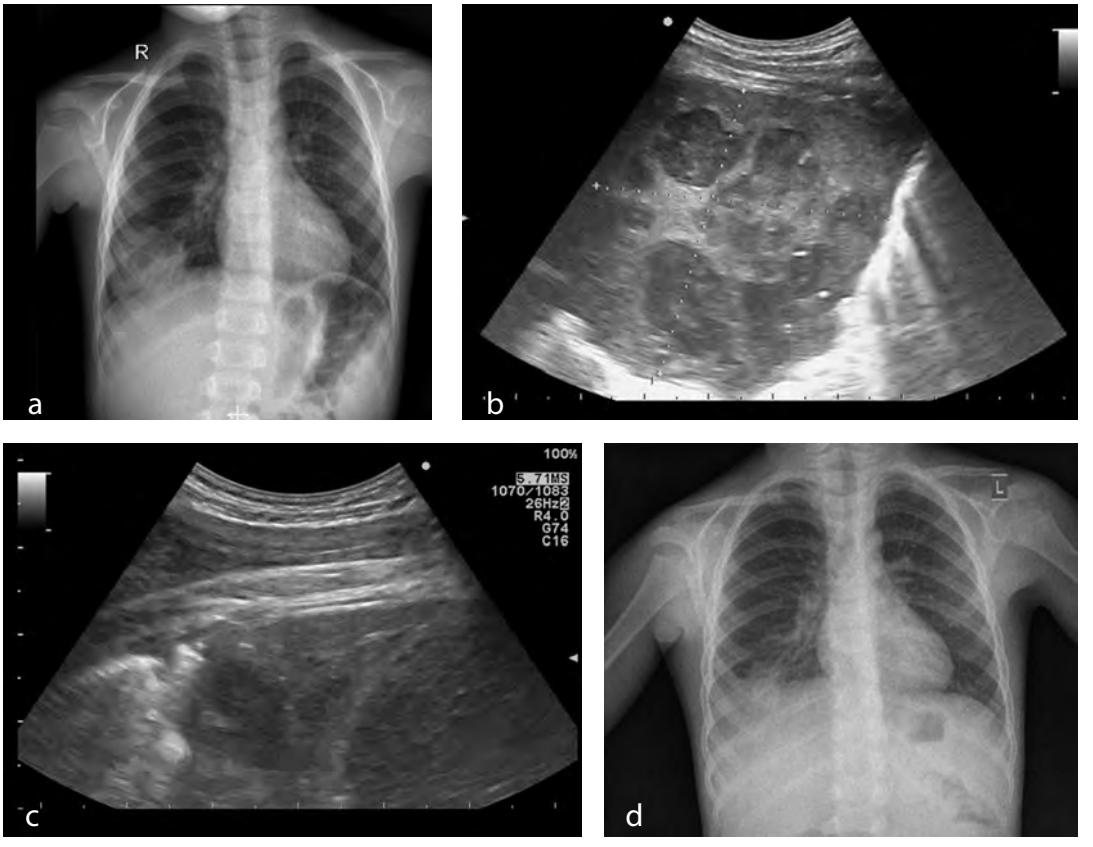

A 5.5-year-old boy with cough, vomiting and fever up to 40⁰ C was admitted to hospital. On examination he was febrile, dehydrated, tachycardic and tachypnoic, with an oxygen saturation level of 93% of room air. Auscultation was unremarkable. His laboratory results showed increased inflammatory markers and leukocytosis (CRP 270.5 mg/l, WBC 16.8x10/9). Chest radiography (CXR) showed a round consolidation in the right lower lobe and no signs of pleural effusion in the right costophrenic sulcus (Panel a). The working diagnosis was pneumonia and antibiotics were initiated. To monitor and follow-up the round consolidation and to exclude pleural effusion, chest ultrasonography

(CUS) was performed on the 6th day. Consolidated right lower lung, containing several round hypoechoic regions, suggesting tissue destruction and formation of abscesses, was identified (Panel b), and no pleural effusion was seen. The abscesses were monitored by serial CUS, and the findings gradually improved (Panel c). On discharge after 16 days of treatment, his inflammatory markers were within normal limits and the consolidation on CXR had improved (Panel d). His symptoms completely resolved and CUS one month later showed normal lung tissue. CXR is the most appropriate imaging test for the initial diagnosis of pneumonia. CUS can be a useful, valuable, non-invasive, radiation-free method to evaluate complications of pneumonia, including pulmonary abscess formation.

Key words: Lung abscess ▪ Lung ultrasonography ▪ Chest radiography ▪ Children.

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