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Letter to the Editor

Lung magnetic resonance imaging in pulmonary hydatid in children

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Dear Editor,

We read with interest the article entitled "The spectrum of imaging findings in pulmonary hydatid disease and the additive value of T2-weighted magnetic resonance imaging in its diagnosis" by Naseer *et al.* [1]. The authors described the spectrum of imaging findings in pulmonary echinococcosis and studied the additive value of T2-weighted magnetic resonance imaging (MRI) in the characterisation of pulmonary hydatid disease. They concluded that "Most of the pulmonary hydatid cysts can be diagnosed on computed tomography (CT); however, sometimes the findings may be indeterminate or atypical, leading to a diagnostic dilemma. MRI, owing to its ability to demonstrate hypointense endocyst, can act as a useful adjunct to correctly diagnose hydatid cyst or suggest an alternative diagnosis".

We wish to highlight that recent publications have highlighted the potential role of MRI as a radiation-free alternative to multidetector computed tomography (MDCT) for imaging in children, particularly those with different kinds of pulmonary infections and compromised immune systems [2-7]. Technological advances in MRI and faster acquisition sequences help in high-quality MRI of the lung [2-7]. Lung MRI has been reported to have higher diagnostic accuracy and sensitivity in the detection of pulmonary hydatids than computed tomography [2,3].

Sodhi *et al.* [2] prospectively investigated the diagnostic accuracy and added value of fast MRI in 28 children (5-17 years) for evaluating pulmonary hydatid disease by comparing MRI findings with MDCT findings. The combined total scanning time for all 4 MRI sequences used in this study was approximately 2-5 minutes only. The accuracy of fast MRI and MDCT for detecting pulmonary hydatid cysts was found to be 92.86%. There was no difference between fast MRI and MDCT for accurately detecting pulmonary hydatid cysts ($p < 0.001$). Internal membranes were detected in 11 of 28 patients (39.28%) with fast MRI, and in 3 of 28 patients (10.71%) with MDCT. Almost perfect interobserver agreement was present between the 2 independent reviewers ($\kappa = 1$). They concluded that fast MRI without intravenous contrast is comparable to MDCT for accurately detecting lung cysts in paediatric patients with pulmonary hydatid disease. However, fast MRI provided a 28.6% increase in added diagnostic value by showing internal membranes of cysts, which are specific to pulmonary hydatid disease. Therefore, fast MRI should be considered in lieu of MDCT as a primary problem-solving radiation-free imaging modality after initial chest radiography in paediatric patients with clinically suspected pulmonary hydatid disease.

Conflicts of interest

The authors report no conflict of interest.

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Authors' contribution:
A Study design · **B** Data collection · **C** Statistical analysis · **D** Data interpretation · **E** Manuscript preparation · **F** Literature search · **G** Funds collection