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عنوان مقاله:

Clinical Value of Low Dose CT- Scan in Pediatric Chest Diseases: Adequacy Assessment

محل انتشار:

مجله بین المللی کودکان, دوره 8, شماره 2 (سال: 1399)

تعداد صفحات اصل مقاله: 7

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خلاصه مقاله:

Background Radiation dose about 400 times that of standard thoracic computed tomography (CT) in comparison with chest X- ray resulting in different approaches to decrease radiation dose have been established in the last few years to prevent possible side effects especially in children, such as low dose protocols. The aim of this study was assessment of clinical value of low dose CT in pediatric chest diseases. Materials and Methods This prospective study was conducted from 2017 to 2019 in the radiology departments of Dr. Sheikh Children's hospital and Imam Reza Hospital, Mashhad, Iran. The low dose CT scans were conducted at 90 kVp and 30 mAs (for 0-6 years age group) in 27 cases or 50 mAs (for 6-12 years age group) in 17 cases. Eventually, the radiologic findings were compared with the confirmed diagnosis by pediatric pulmonologist based on clinical, laboratory and imaging findings. Data were analyzed and Kappa agreement coefficient test was performed to determine agreement between the low dose CT findings and the final diagnosis. Results Forty-four children were enrolled in this study. 72.7% (32 cases) of all patients had chronic cough as the most common initial symptom, and hyperactive airway disease (10 patients, 22.7%), and persistent bacterial bronchitis (9 patients, 20.5%) were the most frequent chest diseases. There was perfect agreement between the CT- scan findings and final diagnosis (k=1, p<0.001). Conclusion The current study revealed that diagnostic findings of the low dose CT- scan was adaptive with clinical needs for the final diagnosis.

کلمات کلیدی:

Chest, Children, Clinical Value, Low dose CT- scan

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