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**Title:** HRCT features do not predict the clinical course in children with protracted bacterial bronchitis

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**Body:** Background/Aim:Chronic wet cough suggests endobronchial infection. We aimed to investigate the relation between the initial radiological findings and clinical course as well as the evolvement of radiological findings in patients whose clinical findings persisted despite treatment. Methods: We retrospectively reviewed 90 patients aged 0.6 to 16.4 years, with chronic endobronchial infection. In 25 (27.8%) patients follow up HRCT scan was performed (1<sup>st</sup> group), 6-38 months apart (median 13 mo) based on clinical grounds, mainly on the duration of symptoms despite long courses of antibiotic treatment and physiotherapy; the remaining 65 (72.2%) had a remitting course and a second scan was not considered necessary (2<sup>nd</sup> group). Severity of involvement was assessed with Bhalla score and presence of bronchiectasis, per se. Results:Radiological findings on the first HRCT did not differ between the 2 groups (Bhalla scores:  $2.7\pm 0.3$  and  $2.6\pm 0.3$ ,  $p=0.80$ ; presence of bronchiectasis: 10 and 27,  $p=0.9$  in the 1<sup>st</sup> and 2<sup>nd</sup> group, respectively). In 1<sup>st</sup> group 10 children had bronchiectasis in the 1<sup>st</sup> HRCT scan compared with 14 in the second scan ( $p=0.10$ ). Bhalla scores did not differ between the 1<sup>st</sup> and the 2<sup>nd</sup> CT-scan (mean values $\pm$ sd:  $2.7\pm 0.2$  and  $2.9\pm 0.4$ , respectively,  $p=0.60$ ). There was no difference in bronchoscopic / bronchoalveolar lavage findings. Conclusion: Radiological findings do not suffice to predict the clinical course of protracted bacterial bronchitis. Although the literature suggests that radiological findings may be reversible, this is not the rule. Apart from the intensity of treatment, there are probably other - as yet unidentified- factors that determine the final outcome of the disease.