

COMMENTS ON: AIRWAY FOREIGN BODIES IN CHILDREN: EXPERIENCE OF 132 CASES

Dear Sir,

We read with interest the original article by Dr Yadav et al⁽¹⁾ published in the September 2007 issue of your prestigious journal. The authors describe their vast experience over a period of 20 years in the diagnosis and management of 132 cases of airway foreign bodies in the paediatric population in the Indian context. The history, clinical and chest radiographic findings of foreign body aspiration (FBA) are often nonspecific, and a delay in diagnosis is not uncommon, resulting in morbidity and mortality. Bronchoscopy, especially in children, is not without potentially serious complications, even in expert hands.⁽²⁾ It is extremely important to quickly screen patients so as to identify those who would need early bronchoscopy and intervention. At the same time, it is equally important to exclude disease processes, such as respiratory tract infection; and asthma, which can mimic FBA, so that one can avoid needless bronchoscopy. This is where the role of cross-sectional imaging comes in.

The authors mentioned the utility of magnetic resonance (MR) imaging in the definitive diagnosis and localisation of peanut fragments in the lower airway. However, there was no mention of the role of computed tomography (CT), especially multi-detector CT (MDCT) in the diagnosis and management of airway foreign bodies in the paediatric population. In this regard, we would like to mention the following few points that have not been elaborated in the article. MDCT allows accurate delineation of the tracheobronchial tree up to the sub-segmental level. It is highly sensitive for the detection of the presence of any intra-luminal filling defects in the tracheobronchial tree and has a very high negative predictive value. CT imaging also allows the simultaneous evaluation of lung parenchyma. Due to volume scanning and nearly isotropic voxels, MDCT also enables excellent multiplanar reformations (MPR) with increased diagnostic accuracy. Virtual bronchoscopy is a valuable post-processing technique which enables simulated internal rendering of the tracheobronchial walls and lumen, similar to actual bronchoscopy. Virtual bronchoscopy provides a good roadmap for the bronchoscopist when interpreted along with the cross-sectional and MPR images. In our limited two-year experience with MDCT, we have found it extremely useful in the evaluation of suspected FBA. Children with FBA often have tachypnoea. Such children can be easily studied with MDCT without much concerns for the respiratory rate because of the short scan time. We were able to get diagnostic quality images in a few cases that had severe tachypnoea (respiratory rate > 60 per minute). Worldwide, the role of MDCT in the diagnosis and management of FBA is well established. Emphasis is also given to the use of low-dose MDCT protocols for the detection of FBA in children.^(3,4) Although, the authors mentioned the use of MR imaging for the detection of peanuts, there are some practical concerns. Most of these children are usually quite sick, and the time taken for a MR examination is much longer. In addition, the signal-to-noise-ratio is not appreciably better than CT in these cases. To date, CT, preferably low-dose MDCT, remains the diagnostic modality of choice for the evaluation of children with suspected FBA, before they are being subjected to conventional bronchoscopy.⁽⁴⁾

Yours sincerely,

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