Reviewer's report

Title: Airway Sizes and Proportions in Children Quantified by a Video-Bronchoscopic Technique

Version: 1 Date: 19 January 2006

Reviewer: Christian Witt

Reviewer's report:

General

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

The present manuscript is the first to report clinical experience in measuring airway size in a larger cohort of children with a colour histogram mode technique (“CHMT”). This technique has been developed and previously published by the authors. The results from three different age groups show progressive growth of the airways with increasing age while proportions remain constant.

The study is very interesting and brings innovative technique into the bronchoscopy unit.

There are just two minor comments:

- The precise distance between the bronchoscope and the “target area” is one of the key problems. Withdrawing of the bronchoscope for precisely 10mm from a carina is already difficult but doing the same for a “target area” somewhere in the main bronchi is even more difficult since all structures are mobile. The fact that for certain areas (e.g. lower upper lobe) image acquisition and/or measurement was possible in only 71% (89/125) reduces the clinical value of the technique.
- Using CHMT the measurements must somehow be influenced by the angle in which the bronchoscope is with respect to the target lumen.

The authors should comment on this.

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Discretionary Revisions (which the author can choose to ignore)

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable
Statistical review: No

Declaration of competing interests:
'I declare that I have no competing interests'