Reviewer's report

Title: Bridging Bronchus - a rare cause of recurrent wheezy bronchitis

Version: 2 Date: 1 March 2012

Reviewer: Sebastian Schmidt

Reviewer's report:

Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)

1. Pictures (with exception of Fig. 1) are of excellent quality. Is there a qualitatively better figure available for fig.1?
2. In Fig. 3, it would be useful to demonstrate where the different bronchi (upper, middle on the right and lower lobes) origin. That would show more clearly what kind of bronchus one finds in these five different situations and what is trachea and what bridging bronchus.

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

1. There is no author from the Department of Pediatric Radiology. The institution should be deleted or the authors corrected.

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

1. The main question of this case report is the kind of malformation present in this patient.

CT scan of the lung demonstrated a tracheal origin of the right upper lobe bronchus. The actual bifurcatio tracheae was located little more distally than usual (at a lower vertebral level than that of the normal carina) with a tracheal stenosis between upper lobe bronchus and main carina. Distal of the main carina the bronchial system seems to be mainly normal in bronchial architecture.

A right upper lobe bronchus leaving the trachea and not the right main bronchus with additional malformations in the bronchial tree like tracheal stenosis are rare malformations.

The original paper by Gonzalez-Crussi published a “bronchial drainage of the right middle and lower lobes that were provided by a large bronchial branch that originated in the left main-stem bronchus (it seems to be the distal trachea, see below) and bridged the mediastinum before entering the contralateral lung. Crossed anatomic airway relationships after formation of primary branches are incompatible with current concepts of embryologic lung development.” Obviously, Gonzalez-Crussi et al. had a similar malformation with a tracheal origin of the right upper lobe. They defined this site, where the upper lobe bronchus leaves the trachea, as bifurcatio tracheae. The left airway was described as left main
stem bronchus. It is questionable if this is correct as it seems to be the distal trachea. Bifurcatio trachea is defined as the site where right and left stem bronchus are beginning. Using this definition bifurcatio tracheae would be distally and located not in the middle but in the left side of the thorax with a long bridging (right main stem) bronchus. These are the two special features of this patient in the paper by Gonzalez-Crussi (bifurcation tracheae displaced to the left side and a long right main bronchus from left to right side). Furthermore, the latter concept would be compatible with current concepts of embryologic lung development.

Schnabel et al. report about a very interesting patient with a complex pathology. They correctly described the pathology in their CT-scan. Authors may discuss the different anatomic variants and may prove if the concept of bridging bronchus is applicable in this case. A good definition what a bridging bronchus is, would be helpful.

In summary, it is a seldom malformation that is very impressive not only for a pediatric pulmonologist and should be published. The reviewer approves the paper for publication after revision.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.