Identification of a hypertrophied bronchial artery using three-dimensional computed tomography

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A 56-year-old woman, presenting with bronchiectasis (Fig. 1), underwent a chest computed tomography (CT) with three-dimensional reconstructions showing marked hypertrophy of the bronchial arteries (Fig. 2, Video 1). This pathophysiological phenomenon places the patient at high risk for haemoptysis. While generally managed by bronchial artery embolisation, haemoptysis might require thoracic surgical intervention.

Fig. 1. (A) High-resolution CT showing marked bronchial dilatation and bronchial wall thickening consistent with bronchiectasis. (B) Axial CT section with mediastinal window settings. Notice the presence of a hypertrophied bronchial artery, appearing as several nodular and linear densities along the central airways (some depicted by white arrows).

Fig. 2. The anatomical origin (black arrow) and course of the dilated and meandering bronchial artery is clearly depicted using 3-D computed tomography volume-rendering.

Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at doi:10.1016/j.ejcts.2009.05.028.