

The Opportunities of the Virtual Bronchoscopy in Diagnostic of Traumatic Bronchial Rupture (Clinical Observation)

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Abstract

Unnoticed bronchial injury during the early stage of treatment of multiple trauma is not rare and increases mortality and morbidity. Three-dimensional reconstruction of the airways using a workstation connected to a multidetector chest computed tomography (CT) scanner may change the diagnostic strategy in patients with blunt chest trauma with clinical signs evocative of bronchial rupture. In this case report of a young victim of the road accident, a complete disruption of the intermediary trunk was first misdiagnosed using standard chest helical CT and bronchoscopy. Postprocessing procedures including three-dimensional extraction of the tracheobronchial tree were determinants for establishing the diagnosis, and emergent surgical repair was successfully performed. Follow-up using CT with three-dimensional reconstructions evidenced a bronchial stenosis located at the site of the rupture. The present study demonstrates the potential interest of performing three-dimensional reconstructions by extraction of the tracheal-bronchial tree in patients with severe blunt chest trauma suspected of bronchial rupture.

Key words: Multislice Computer Tomography, Virtual Bronchoscopy, Bronchial Rupture, Blunt Chest Trauma.

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