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Title: Endoscopic narrow-band imaging-quantitative assessment of airway vascularity of sarcoidosis

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Body: Introduction or background: Various changes of subepithelial vessels of the bronchial mucosa occur in some respiratory diseases. NBI is a new technology that improves the image contrast of the surface structure by adjusting the spectrum feature regarding the wavelength dependency of the light penetration depth into the tissue and the hemoglobin absorption. We have observed in sarcoidosis patients of subepithelial vessels using a narrow-band imaging of bronchofiberscope. Aims and objectives: It was our aim to investigate the ability of narrow-band imaging in combination with computerized image analysis to quantitatively assess airway vascularity in sarcoidosis patients. Methods: In consecutive sarcoidosis patients, the routine procedures, optical analysis of the main carina and the upper lobe carina were performed. From every site, five representative pictures were chosen. Results: A total of 16 sarcoidosis patients were analyzed. Increased numbers of vessels were found and these vessels were also observed in areas of cartilage. Angiogenesis or mucosal thickening was observed. Conclusion: High magnification view with NBI revealed a clear fine subepithelial microvessel network that could be seen hardly with the ordinary filter. This combination seemed to be useful for study of the relationship of subepithelial vessels and pathogenesis of sarcoidosis.