

## Application of interventional bronchoscopic therapy in eight pediatric patients with malignant airway tumors

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### ABSTRACT

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**Aims and background.** Malignant airway tumors in children have rarely been reported. We evaluated the safety and therapeutic effects of interventional bronchoscopic therapy in 8 children with malignant airway tumors.

**Methods and study design.** We retrospectively analyzed 8 children with malignant airway tumors diagnosed by pathology, and evaluated their clinical features, chest computer tomography findings and bronchoscopic manifestations.

**Results.** Two of the 8 pediatric patients had high-grade malignancies (lymphoma and sarcoma) and the others all had low-grade malignancies, including 2 cases with mucoepidermoid carcinoma and 4 cases with inflammatory myofibroblastic tumor. Their ages ranged from 4 to 8 years (mean,  $5.7 \pm 0.9$ ). There were no specific clinical manifestations in the children, and all of them presented with various respiratory symptoms, including cough and gasping associated with hemoptysis. Chest CT indicated round intra-airway neoplasms. Obstructive pulmonary atelectasis occurred in the main bronchus of 4 patients (3 cases of the left main bronchus and 1 case of the right intermedius bronchus). All children (1 case with local anesthesia and 7 cases with general anesthesia) underwent interventional bronchoscopic therapy, including argon plasma coagulation and CO<sub>2</sub> cryosurgery. The success rate for the rigid procedures was 100.0% (7/7), and the cure rate after 3 months was 85.7% (6/7). A part of the tumor remained in the lung of 1 patient with inflammatory myofibroblastic tumor after bronchoscopic treatment. One patient with local anesthesia died of suffocation caused by tumor consolidation during the bronchoscopic procedure. There were no recurrences in 6 patients during the follow-up period. One recurred patient was cured at 6 months.

**Conclusions.** There are no specific manifestations in children with malignant airway tumors. Interventional bronchoscopic therapy seems to be safe and effective for those tumors under general anesthesia.

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**Key words:** airway, bronchoscopy, children, malignant tumor.

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