



Giant endobronchial carcinoid tumor resected by cryosurgery and rigid bronchoscopy

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Background

Lung Carcinoid tumors are neuroendocrine tumors that mainly have central distribution in the airway as endobronchial masses. Bronchial carcinoids typically produce airway obstruction with lung collapse. Surgical resection is the preferred treatment in their localized stages but endobronchial treatment via Bronchoscopy may be appropriate for patients with small carcinoids limited to the airway, tumors considered unresectable, or when the patient refuses surgery.

Case Report

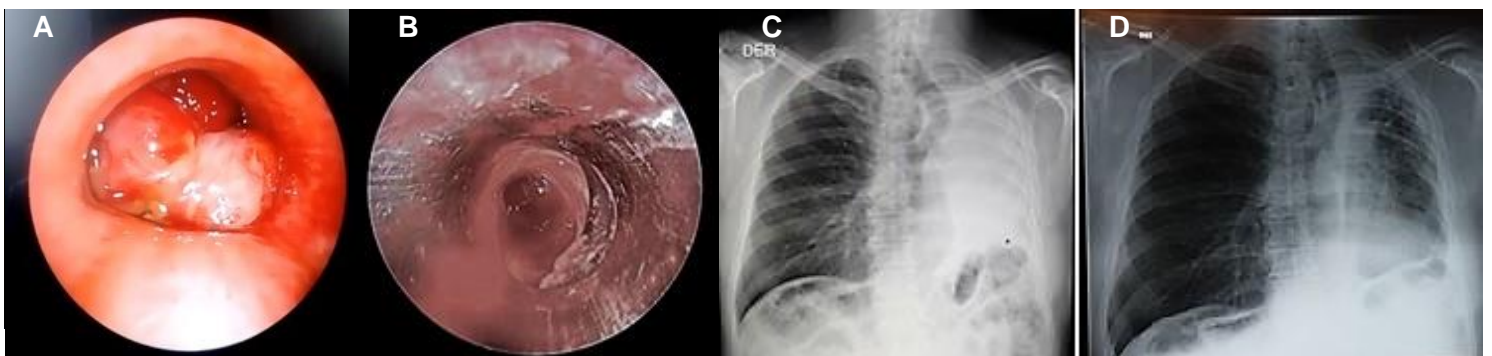
A 59-year-old man developed complete atelectasis of the left lung due to an endobronchial tumor in the left main bronchus (LMB). He presented with mild dyspnea on exertion and had a good performance status. Tomography shows complete left lung collapse, enhancing soft-tissue tumor in the distal zone of the LMB of 3.6 cm × 3.4 cm. Bronchoscopy found a large, vascularized, broad based, exophytic tumor causing complete occlusion of distal LMB. Histological analysis showed typical bronchial carcinoid. The tumor was considered unresectable due to abnormal lung function tests. Endobronchial Cryosurgery and Rigid Bronchoscopy under general anesthesia was then

performed and cryorecanalization was achieved using a cryosurgery unit with a 2.4 mm cryoprobe. Rigid forceps and rigid bronchial barrels were also used for complementary mechanical debulking. After the procedure patient reported better exercise tolerance and a follow-up chest x-ray showed a significantly ventilated left lung.

Conclusions

Cryosurgery for endobronchial resection via Rigid Bronchoscopy is a safe and effective treatment for bronchial carcinoid tumors specially in broad based lesions. Cryo-Recanalization has low risk of moderate to massive bleeding and may be superior to thermoablation techniques because it does not have the risk of endobronchial fire and has lower risk of airway perforation. Patients will require long term follow-up to exclude recurrence of disease. Interventional bronchoscopic and surgical approaches should be considered complementary to optimize management of Carcinoid Tumors.

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(A) Exophytic tumor that causes complete occlusion of the distal LMB. (B) Result of cryorecanalization and rigid bronchoscopy. (C) Previous chest x-ray showing complete collapse of the left lung. (D) Post procedure chest x-ray showing expansion of the left lung.