Balloon-assisted Removal of Obstructing Bronchial Granuloma: 2 Year Follow-up

Chase Lay, M.D. Gayle Woodson, M.D.
Southern Illinois School of Medicine Division of Otolaryngology Head & Neck Surgery, Springfield, IL

Introduction

• Segmental pneumonia from an obstructing lesion or stenosis is not uncommonly reported particularly with a history of foreign body or infection
• Balloon dilation of these segments have been reported with good success
• In this case dilation was to be used to treat a presumptive diagnosis of bronchial stenosis, but bronchoscopy revealed an uncommon obstructing polyp
• Long-term follow-up reveals a patent bronchus without residual pulmonary disease after a balloon-assisted removal of an endobronchial tumor

Case Report

A two-year-old male presented with several months of recurrent right-upper pneumonia due to Histoplasmosis. Medical management, including IV and PO antibiotics as well as oral itraconazole, was ineffective. Flexible bronchoscopy revealed obstruction of the right superior lobe orifice. A rigid bronchoscope and Fogarty balloon (see Description of Procedure) were used to remove a pedicled lesion in the endobronchial space.

Procedure

• Rigid bronchoscopy was performed with intent to dilate a presumed stricture of the right superior bronchus
• A pinhole opening was found at the takeoff of the anterior segment of the right superior lobe (Figure 1a)
• A 0.2cc Fogarty biliary balloon was inserted into the lumen, inflated, and then withdrawn (Figures 1 d&e)
• This dislodged and avulsed a 0.3x mm mass that had been pedicled on the anterior wall of the orifice (Figure 1c)
• The mass was retrieved by suction catheter
• Pathologic diagnosis was chronic granuloma with calcifications

Discussion

Review of the literature did not reveal a report of a balloon-assisted removal of a tumor in this manner. Balloon assisted dilation is not often used in distal airways and is usually performed under fluoroscopic control. In recent years its use has been reported under endoscopic visualization alone. Complications include superficial laceration with no sequela, or pneumothorax or pneumomediastinum due to tranbronchial rupture. Balloon dilation is a useful tool in the management of obstructing lesions in the respiratory tract. It now appears that removal of pedicled tumors by evulsion with a balloon is a viable technique evidenced by the above case.