



Complication of Tracheobronchial Prosthesis: Occlusion due to Secretions

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Abstract

A large proportion of patients with advanced lung neoplasia will develop major airway obstruction. We present a 68-year-old man with small cell lung carcinoma, with a tracheo-bronchial stent, admitted to the emergency room with sudden dyspnea, hypoxemia and abolished breath sounds on the right. The radiography showed a complete opacification of the right lung and a chest computed tomography revealed total occlusion of the stent in the right main bronchus. He underwent rigid bronchoscopy with removal of thick secretions and clots, with lung re-expansion and resolution of respiratory failure.

Keywords: lung cancer, airway stent, airway stent complication.

Introduction

A large proportion of patients with advanced lung cancer will develop major airway obstruction. Placing an airway stent is a palliative measure that contributes to a significant improvement in quality of life, reducing symptoms of dyspnoea, the need for supplemental oxygen, and may improve survival [1,2]. Its most common complications include migration of the prosthesis and stenosis, generally due to the cancer mass itself or granulation tissue; obstruction by secretions is less common [3,4].

Case Report

We present the case of a 68-year-old man with small cell lung carcinoma, who had a Y-shaped silicone tracheobronchial stent placed a year before. He had a recent history of stent stenosis by tumoral growth, requiring local treatment with rigid bronchoscopy and laser therapy.

Patient is admitted to the emergency room due to sudden onset dyspnoea with evidence of hypoxemia requiring supplemental oxygen and abolished breath sounds on the right. The chest X-ray showed a complete opacification of the right lung (Fig. 1), prompting a chest computed tomography which revealed obstruction of the right airways, with practically complete atelectasis of the right lung (Fig. 2).

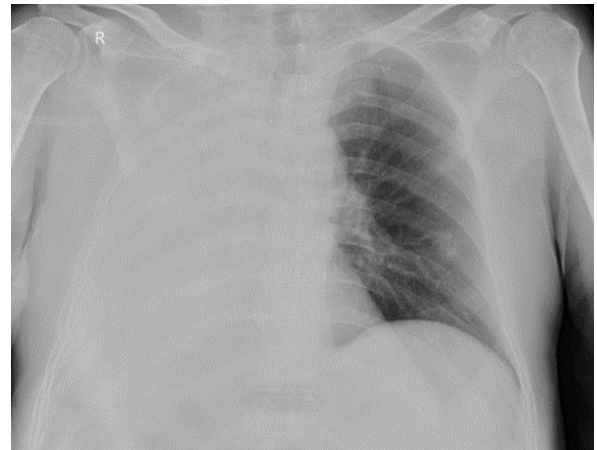


Fig.1: Chest X-ray upon admission, showing complete opacification of the right lung



Fig. 2: Chest computed tomography, coronal view, showing the tracheobronchial stent, occluded on the right side, with right lung atelectasis

Due to the presumption of neoplastic progression with stenosis of the stent, he was admitted in an internal medicine ward to undergo life-saving chemotherapy. On the same day, he underwent rigid bronchoscopy, where obstruction was discovered to be by thick secretions, described as having a “chewing gum consistency”, as well as small blood clots. There was no apparent cancer invasion. After the procedure the patient achieved complete resolution of respiratory failure and a new chest X-ray confirmed right lung expansion.

The bacteriological examination of the secretions later identified *Staphylococcus aureus* and *Stenotrophomonas maltophilia*, prompting directed antibiotic therapy. The patient was asymptomatic at discharge.

Conclusions

This case serves as a reminder that airway stent occlusion is not always by tumour progression. In this case, the sudden onset of dyspnoea should have pointed in a different direction. An interdisciplinary approach of these type of patients is recommended.

Ethics approval and consent to participate

Consent was given by the patient for the writing of this article and image reproduction.

Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

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Authors' contributions

BB was involved the patient care, collected and analysed the patient data and wrote the manuscript. IU was a major contributor in writing and reviewing the manuscript. CL was a major contributor in reviewing the manuscript. JSF was involved in the patient care and a major contributor in reviewing the manuscript. AB was involved in the patient care and a major contributor in reviewing the manuscript. EM was a major contributor in writing and reviewing the manuscript.

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