

Metalloptysis and Bronchopulmonary Fistula after Sleeve Resection for Carcinoid. Rare or Not?

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1. Abstract

Bronchial neuroendocrine tumors (carcinoids) are a rare group of pulmonary neoplasms, and lung is the second most common site. Sleeve lobectomy is very useful to treat lesions involving main or lobar bronchi.

We report the case of an unusual post-operative complication, involving the asymptomatic expectoration of surgical staplers over a 6-months period following a sleeve right upper lobectomy for a typical carcinoid. First episode was noted one month after the procedure. A rigid and flexible bronchoscopy was done. Airway was clear and the re-implanted lower lobe bronchus showed no dehiscence or obstruction. The patient returned as he has had at least six staples coughed up at unexpected episodes of severe coughing. He denied any haemoptysis, and his chest x-ray was satisfactory despite right-sided volume loss consistent with his surgery. Another rigid and flexible video assisted bronchoscopy performed and a stitch material from the apical lower lobe bronchus (at right side) was retrieved. There was no evidence of carcinoid recurrence.

Flexible bronchoscopy done and showed staples at origin of apical right lower lobe bronchus, and a bronchopulmonary fistula, that looked smaller on a next bronchoscopy.

2. Decision was made to Continue Conservatively

2.1. Patient is asymptomatic in the next two years of follow up

Carcinoids (typical and atypical) or bronchial neuroendocrine tumors are a rare group of pulmonary neoplasms with unusual clinical behavior and account for more than 80% of the low grade neoplasms. Lung is the second most common site of appearance.

Sleeve lobectomy is very useful to treat lesions involving main or lobar bronchi, even though they are usually benign. Either anatomic location, or if the bronchial resection margin is at risk, sleeve resection should be considered as treatment option.

We present the case of an unusual post-operative complication, involving the asymptomatic expectoration of surgical staplers over a 6-months period following a sleeve right upper lobectomy for a typical carcinoid. First episode was noted one month after the

procedure.

The patient, a 25 years old male of Polish origin suffered of productive cough with purulent sputum associated with a temperature, improved following some treatment with antibiotics. Two years before he had an episode of pneumonia.

He is a current smoker of 15 cigarettes a day, for a period of ten years.

CT chest suggested that he had a tumour obstructing his bronchus causing recurrent pneumonia. He had a sleeve right upper lobectomy via right thoracotomy. His immediate postoperative period was uneventful. The histology report came back as a typical carcinoid, with bronchial margins clear. Lymph nodes have been negative.

One month later he suffered a chest infection with copious

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phlegm production and a chest x ray showed patchy changes in the re-implanted lower lobe as well as in the whole left lung.

A rigid and flexible bronchoscopy was done, for sampling of secretions and also to check on the re-implanted anastomotic line. Airway was clear and the re-implanted lower lobe bronchus showed no dehiscence or obstruction. The patient returned as he has had at least six staples coughed up at unexpected episodes of severe bouts of cough. He denied any haemoptysis, and his chest x-ray was satisfactory despite right-sided volume loss consistent with his surgery.

Another rigid and flexible video assisted bronchoscopy performed and a stitch material from the apical lower lobe bronchus (at right side) was retrieved.

3. There Was No Evidence of Carcinoid Recurrence

Flexible bronchoscopy done and showed staples at origin of apical right lower lobe bronchus, and a bronchopulmonary fistula, that looked smaller on a next bronchoscopy.

Decision was made to continue conservatively.

Patient is asymptomatic in the next two years follow up.

4. Discussion

Foreign body erosion into the tracheo-bronchial tree is uncommon with variety in presentation. In literature few reports describe the expectoration of staples and dry bovine pericardial strips used for staple line reinforcement after surgery for emphysema².

Saunders et al reported a case of bullet migration through pulmonary parenchyma and its spontaneous explosion.

Only one paper from Ahmed, Ross of et al. [1] reported a migration of clips from pneumonectomy and spontaneously ex-

pectorated [2].

Di Crescenzo et al. [3] also published a metalloptysis case one year after the procedure, which initially was misdiagnosed as asthma.

In our case, the high degree of suspicion as well as the early onset of the symptoms diagnosed the fistula and the migration of the staples [4,5].

We have chosen the conservative treatment as the fistula wasn't big and the patient was otherwise asymptomatic. Bronchoscopy plays the major role in diagnosis of this complication and for follow up.

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