

Tracheal Polyp Treated with Endobronchial Electrocautery

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ABSTRACT

Fibroepithelial polyps of trachea are extremely rare. Here, we report a case of tracheal polyp in a 40-year-old woman that was managed successfully with endobronchial electrocautery with a review of the relevant literature.

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Key words: Fibroepithelial polyps, Trachea, Endobronchial electrocautery, Flexible bronchoscopy.

INTRODUCTION

Fibroepithelial polyp of the trachea is a rare benign condition which may present with obstructive airway symptoms, like cough, wheezing and breathlessness. Tracheal polyps can be managed by surgical resection or endobronchial tumour resection. We report a rare case of upper tracheal fibroepithelial polyp that was managed successfully with electrocautery through flexible bronchoscopy.

CASE REPORT

A 40-year-old woman presented with progressively worsening shortness of breath for one month. There was no other respiratory complaint. She denied any history of foreign body aspiration. She was a non-smoker and there was no personal or family history of atopy. On examination, she had an audible stridor. Urgent bronchoscopy was performed that showed near total obstruction of the trachea by a smooth, shiny, slightly vascular tumour just below the vocal cords arising from the right wall of the trachea (Figure 1). Examination of the airway further down was not feasible due to the obstruction. A biopsy was deferred in view of potential bleeding/oedema and further compromise of the airway. Differential diagnoses, such as a benign polyp, carcinoid tumour, and malignant lesion of the trachea were considered. After confirming the lower limit of the tumour by computed tomography of the neck, a lower tracheostomy was done to bypass the obstruction and provide a patent airway to breathe. The tumour was resected using a flexible bronchoscope (Olympus BF

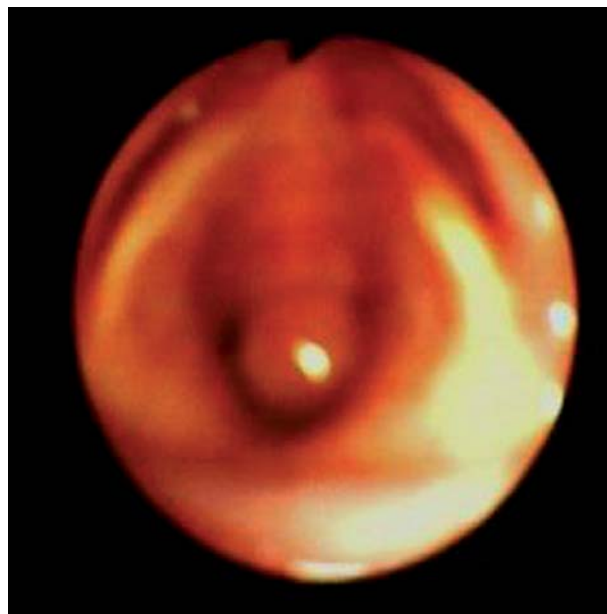


Figure 1. Bronchoscopic view showing the tumour below the vocal cords, completely occluding the lumen of the trachea.

1T 150) by electrocautery (Olympus, PSD-20) using a polypectomy snare (Olympus, SD-5L) by alternating coagulation-cutting modes. The resected tumour was removed with the help of alligator forceps (Figure 2) and was sent for histopathological examination. After resection, the base of the tumour was further cauterised by electrocautery probe (Bipolar Haemostatic Catheter; Boston Scientific). Airway patency was maintained after resection (Figure 3). The tracheostomy tube was removed after three days. The

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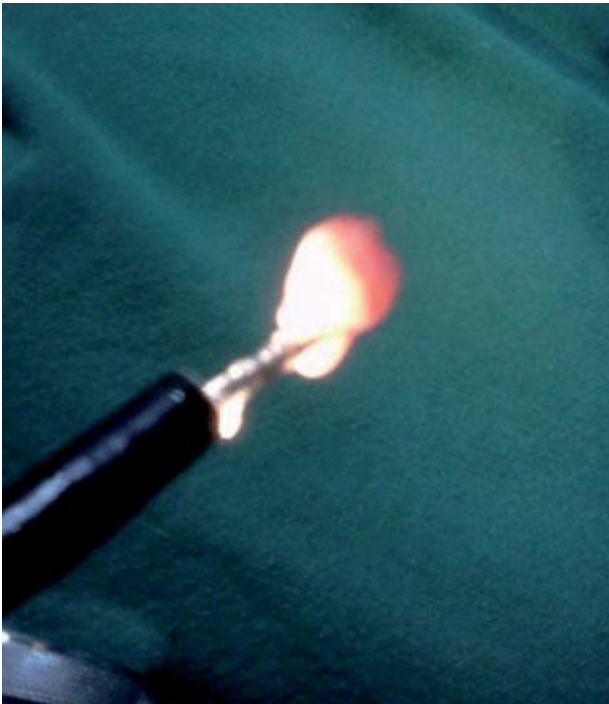


Figure 2. Resected tumour held with alligator forceps passed through the working channel of the flexible bronchoscope.



Figure 3. Bronchoscopic view of the tumour site after resection.

patient could breathe comfortably through the patent airway after tumour resection. Repeat bronchoscopy did not reveal similar lesion in other parts of the bronchial tree. Histopathological examination of the tumour showed fibrocollagenous tissues with dilated and congested blood vessels in the stroma, lined by

respiratory epithelium, suggestive of a fibroepithelial type of benign polyp (Figure 4).

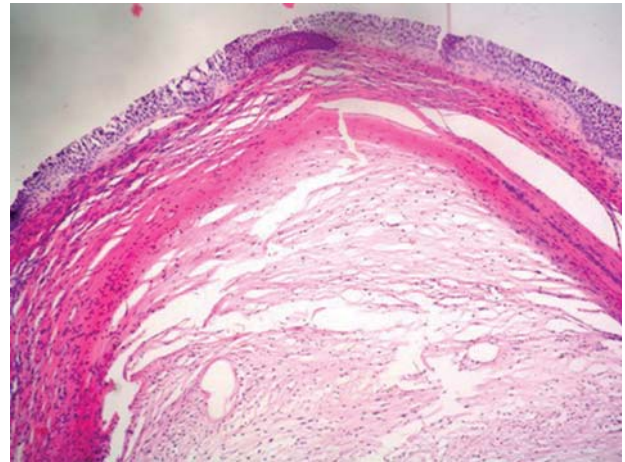


Figure 4. Photomicrograph of the tracheal polyp (Haematoxylin and eosin×100).

On a follow-up visit three weeks later, the patient was asymptomatic, and a repeat bronchoscopy revealed a healing base of the excised lesion.

DISCUSSION

Benign tumours of the airway are uncommon and comprise less than 2% of all airway tumours.¹ Among them, fibroepithelial polyps of the airway are extremely rare. We could find only four case reports of this type of airway tumours in the literature.²⁻⁵ Ushiki *et al*² had reported a similar case in a patient of chronic obstructive pulmonary disease (COPD), who had a polyp at the distal end of the trachea. Komatsu *et al*³ reported a fibroepithelial polyp of right B6 in a 37-year-old woman having repeated episodes of broncho-pneumonia. Dincer *et al*⁴ reported a similar polyp in the lower trachea in a 55-year-old man with a long-standing history of recurrent chest infections. Rowlands⁵ reported the polyp at right lower lobe bronchial orifice in a 38-year-old man presenting with recurrent pneumonia. In our patient, the urgency of breathlessness due to near total obstruction of the trachea and upper tracheal location of the polyp made us to perform a lower tracheostomy and subsequently resection of the polyp.

Fibroepithelial polyps of the airway consist of a fibroepithelial stroma covered with respiratory epithelium. Aetiology of these polyps is unclear, however, chronic inflammation due to COPD, chronic infections, foreign body inhalation, chronic smoke inhalation, and chemical stimulation are believed to play a significant role. We could not find any such predisposing factor in our patient.

In earlier studies, electrocautery^{2,3} and surgical resection^{4,5} have been used as safe and successful method to treat these tumours without recurrence. Electrocautery and argon plasma coagulation have been used to treat various types of benign and malignant lesions of the airway for debulking and have been found to be effective without any major complications.^{6,7} We have also used the electrocautery snare to resect the tumour in toto and electrocautery probe to further debulk the base of the tumour, without any complications.

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