Endoscopic Removal of a Pedunculated Bronchial Lipoma by means of the Hot Snare

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Summary
The complete endoscopic removal by means of the hot snare of a pedunculated bronchial lipoma with a carcinoma in situ in its covering bronchial epithelium is reported. To our knowledge, the endoscopic removal of peripheral polypoid bronchial lesions has not been reported to date. The advantage of this technique lies in its ability to permit an exact histologic examination of the lesion, in contrast to laser vaporisation.

Key words
Bronchial polypoid tumors - Bronchial lipoma - Carcinoma in situ - Bronchoscopy - Hot snare - Laser vaporisation

Introduction
Recent developments in the endoscopic laser technique have almost completely replaced other operative endoscopic procedures in the trachea and the bronchial system. However, the case report presented indicates that besides removal of lesions by means of the laser technique, alternative procedures may offer substantial advantages.

Case report
A 70-year-old male patient was admitted to our hospital with a suspected endobronchial tumor. Early symptoms were back pain, raised temperature up to 38 °C, and a loss of weight of four kilograms within a few weeks. There was no history of hemoptysis. On conventional tomography, a spherical endobronchial tumor was demonstrated in the left upper lobe bronchus in connection with atelectasis in the anterior segment (No. 3). Radiologically, the tumor did not have the typical appearance of bronchial carcinoma.

Bronchoscopy under general anesthesia revealed a polypoid lesion in the left upper lobe bronchus at the level of the orifice of the lingula bronchus. The tumor could not be passed endoscopically with the flexible bronchoscopy. Since the lesion was located relatively peripherally in the upper lobe bronchus, no biopsy material was obtainable with the rigid biopsy forceps. Therefore, several biopsies were obtained with the flexible biopsy forceps of the bronchoscope. During this procedure the tumor was moved into the main bronchus, but complete removal of the lesion was impossible. Histologic examination of the tiny biopsy specimens showed normal bronchial epithelium, but failed to reveal the nature of the polypoid lesion.

Because of the patient's increased operative risks (diabetes mellitus, aorto-liac bypass), a second attempt was made to remove the tumor endoscopically in order to avoid thoracotomy. By means of the hot snare of a gastroscope used for children (1.8 mm in diameter) the polyp (Fig. 1a) was removed completely in several fragments (Figs. 1b and 2), and the patency of the bronchus restored (Fig. 1c). Endoscopic re-examinations of the respective bronchus performed three weeks and six months later, showed no abnormalities of the bronchial mucosa. Histological examination of the polyp revealed a lipoma in the submucosal layer with a carcinoma in situ in the covering bronchial epithelium (Fig. 3).

Fig. 1  Endoscopic view of the polypoid lesion in the left upper lobe bronchus (a), with the snare in place (b) and after complete removal (c)
Fig. 2  Gross appearance of the polyp removed in several fragments

**Discussion**

Endoscopic polypectomy using the hot snare – a routine procedure in gastroenterological endoscopy – in the tracheo-bronchial system has to our knowledge, not been described in the literature to date. So far, the required accessories for bronchoscopic polypectomy are not commercially available. Therefore, we had to use for our purpose a snare taken from a gastroscope otherwise used for children. Since we believe the histological diagnosis of carcinoma in situ in the bronchial epithelium would certainly have been impossible after laser vaporisation of the bronchial tumor, this technique has substantial implications for follow-up. Finally, we may say that the technique is easy to perform, which makes it the procedure of choice in appropriate cases.

![Histologic examination of the polypoid tumor shows a bronchial lipoma (H&E, × 40) with a carcinoma in situ in its covering mucosa.](image)

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