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Endoscopic removal of benign tracheal tumor

Endoskopinis gerybinio trachėjos naviko pašalinimas

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Background

Benign fibroepithelial polyps of respiratory tract are very rare.

Case report

A 42-year-old man was admitted to our hospital suffering from cough and dyspnea. The CT scan of the thorax revealed a round, smooth tumor in the middle part of the trachea. The tumor was successfully removed endoscopically using an electrocautery snare. The postoperative period was uneventful; patient's condition was perfect. Histology showed a fibroepithelial polyp – a rare benign lesion of the trachea.

Conclusions

Endobronchial electrosurgery is a safe and effective treatment method. Clinicians should always consider the possibility of tracheobronchial tumors.

Key words: fibroepithelial polyp, trachea, endobronchial electrosurgery, bronchoscopy

Įvadas

Gerybiniai kvėpavimo takų fibroepiteliniai polipai yra labai reti.

Klinikinis atvejis

Keturiasdešimt dvejų metų vyras atvyko į ligoninę skųsdamasis kosuliu ir dusuliu. Atlikus kompiuterinę krūtinės ląstos tomografiją, nustatytas apvalus, lygus navikas vidurinėje trachėjos dalyje. Navikas sėkmingai pašalintas endoskopiškai, naudojant elektrokoaguliacijos kilpą. Pooperacinis laikotarpis buvo sklandus, ligonio būklė puiki. Histologinio tyrimo išvada – fibroepitelinis polipas – reta gerybinė trachėjos liga.

Išvados

Endobronchinė elektrochirurgija yra saugus ir veiksmingas gydymo metodas. Gydytojai visada turėtų įtarti tracheobronchinio naviko galimybę.

Reikšminiai žodžiai: fibroepitelinis polipas, trachėja, endobronchinė elektrochirurgija, bronchoskopija

Introduction

Benign fibroepithelial polyps of the respiratory tract are rare among all benign endobronchial lesions and compose less than 2% of all pulmonary tumors. There have been only about 5 case reports of tracheal fibroepithelial polyp in the literature [1].

Case report

A 42-year-old man was admitted to our hospital suffering from a cough and dyspnea, especially when lying on the back. The first symptoms had occurred one year before. He attended a family physician, and was treated for bronchial asthma with bronchodilators. The patients' symptoms did not improve, and over last 6 months his condition became worse and worse. Finally a CT scan of the thorax was performed (Fig.1 a, b, c). It revealed a round, smooth tumor in the middle part of the trachea, suspected as carcinoid. The patient was sent to our hospital and was admitted to the thoracic surgery department. He denied having had any previous operations and had been a smoker for 30 years, only quitting two weeks previously.

The patients physical status was quite normal (ECOG – 1), without peripheral lymphadenopathy. The breathing was aggravated, especially breathing out, with an audible whistle. A white and autofluorescent bronchoscopy was done under local anesthesia, and showed a large tumor in the upper-middle tracheal part, obstructing almost 2/3 of the tracheal lumen (Fig. 1 d). The tumor was on the thin pedicle, arising from the left anterior part of the trachea wall. Autofluorescent light didn't reveal any obvious malignant lesion. A biopsy was performed, and an express histologic examination showed a normal bronchial epithelium. The patient was transferred to the operating theatre. He was intubated with a rigid bronchoscope. The tumor was eliminated using a fibrobronchoscope and electrocautery snare (Fig. 2 a). The pedicle's bed was coagulated using argon plasma coagulation.

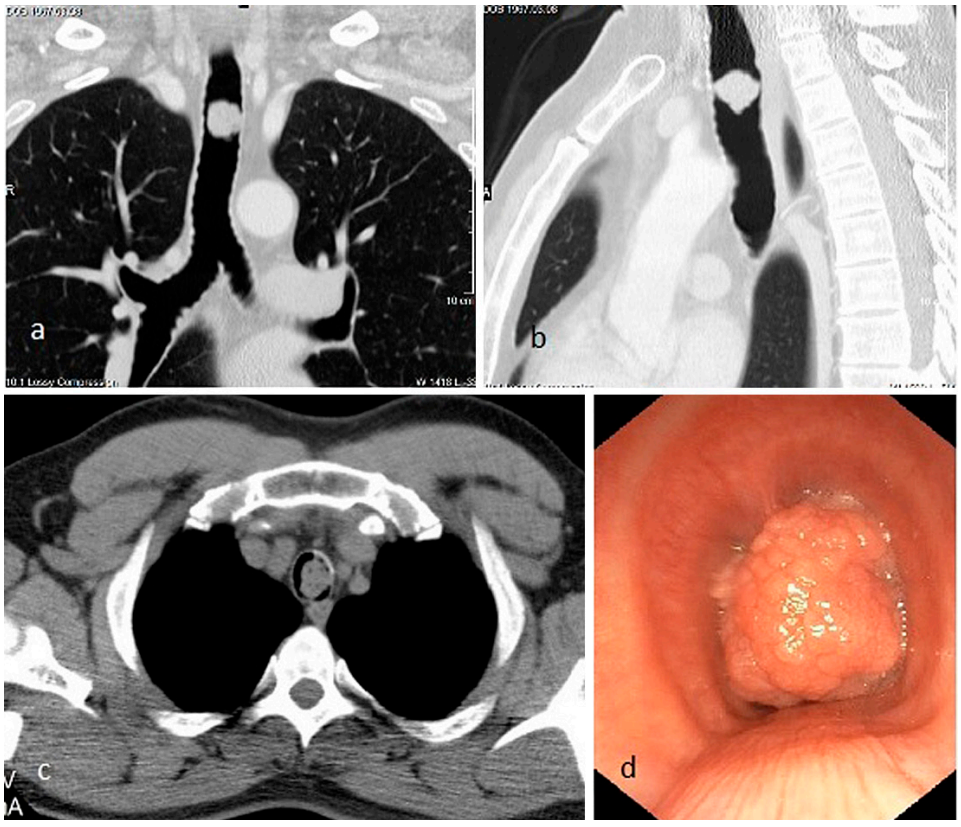

Figure 1. CT scan three-dimensional views (a, b, c), endobronchial view with HD fibrobronchoscope Olympus (d)

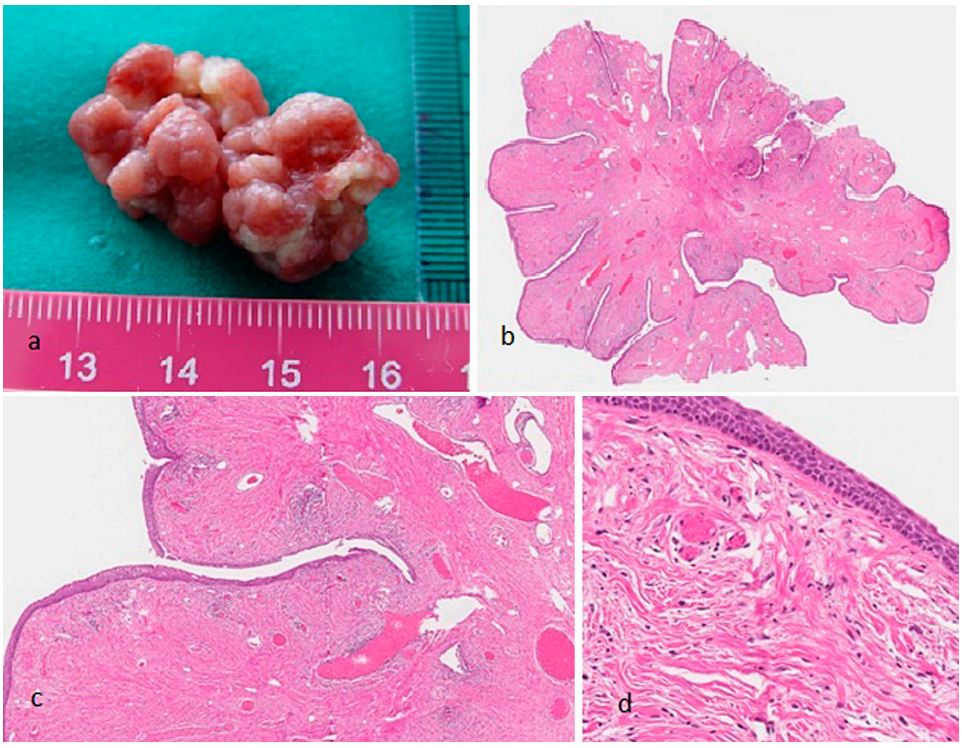

Figure 2. The macroscopic view of the removed fibroepithelial polyp (a), and its microscopic view (HE staining) in different magnifications (b, c, d)

The postoperative period was uneventful; patient's condition was perfect, without any symptoms of dyspnea. After a few days, he was discharged from the hospital.

The histology revealed a fibroepithelial tracheal polyp. The tumor was a pinkish, uneven, fragile tissue, the largest fragment 2.2 × 2 × 1.4 cm. The microscopic view revealed a papillary tumor surface, fibrous stroma with dilated vessels and moderate subepithelial monomorphonuclear infiltration and multilayer flat epithelium (Fig. 2 b, c, d).

Discussion

A tracheal fibroepithelial polyp is a very rare benign tracheal lesion, and was described in the literature only 5 times [1]. This polyp is more common in deeper parts of the respiratory tract, i.e. in the main bronchi or segmental bronchi [2, 3]. We wanted to share our case, because it was among the largest fibroepithelial tracheal polyps in diameter, and was unrecognized for a long time – about one year. The patient was treated for bronchial asthma with bronchodilators and without any success. The infrequency of such cases, results in a low level of identification among physicians.

The etiology of fibroepithelial polyps still remains unclear. There is a hypothesis that fibroepithelial polyps in the respiratory tract are a type of inflammatory polyp related to a form of underlying irritation or an inflammatory process such as smoke inhalation, COPD, bronchial asthma, or chronic infection [1, 4]. In our case, there was long-term cigarette smoke exposure and infection.

We removed the fibroepithelial polyp endoscopically with an electrocautery snare, as has been described by other authors [1–5]. In addition we used argon plasma coagulation at the resection site, as was used in a case described by Ushiki A and co-authors [4].

There was one case when a tracheostomy was performed before endoscopic removal of the fibroepithelial polyp [5]. In our case, we didn't need to do this. This was because of the tumor's fluctuating in the trachea on its pedicle with breathing movements alleviating the air passage.

Recurrence of fibroepithelial tumors are very rare, described only in one case 6 months after tumor resection [3]. Our control was performed after 5 months, and revealed no recurrence.

Conclusions

Benign fibroepithelial polyps of the respiratory tract are very rare, thus the infrequency of such cases results in a low level of identification among physicians. This results in a late diagnosis and treatment. Clinicians should always consider the possibility of tracheobronchial tumors in the differential diagnosis of recurrent pneumonia and refractory asthma. Endobronchial electrosurgery is a safe and effective method for these patients, and is the treatment of choice. Further control is recommended to detect any relapse.

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