



Endoscopic treatment of primary benign central airway tumors: Results from a large consecutive case series and decision making flow chart to address bronchoscopic excision

S. Scarlata ^{a,*}, P. Graziano ^b, G. Lucantoni ^c, P. Battistoni ^c,
S. Batzella ^c, R. Dello Jacono ^c, R. Antonelli Incalzi ^a, G. Galluccio ^c

^a *Geriatrics, Unit of Respiratory Pathophysiology and Thoracic Endoscopy, Campus Bio Medico University and Teaching Hospital, Rome, Italy*

^b *Pathology Unit, IRCCS Casa Sollievo della Sofferenza, San Giovanni Rotondo, Foggia, Italy*

^c *Unit of Thoracic Endoscopy, San-Camillo Forlanini Hospital, Rome, Italy*

Accepted 13 August 2015

Available online 24 August 2015

Abstract

Background: Benign tracheo-bronchial neoplasms are rare, but potentially dangerous conditions with life threatening consequences. Tumor removal should be pursued by methods minimizing the procedural stress. The role of endoscopic treatment, as an alternative to open surgery, remains controversial.

Objectives: report the twelve-years endoscopic experience in Rome, Italy. Fifty-seven benign tracheo-bronchial tumors were diagnosed and 130 tracheo-bronchial resections by rigid bronchoscopy performed.

Methods: we identified histotypes associated with higher recurrence rate and assessed their relationship with gender, age and tracheo-bronchial location. We provided data on safety and complications and suggested a decision making flow chart to address the patients to endoscopic resection.

Results: complete eradication after a single procedure without recurrence at 2 years was obtained in 63.1% of cases (36/57). Need of a second intervention within few months but no further recurrence at follow up was seen in a further 8.8% (5/57). Histotypes associated with recurrence were papillomas and inflammatory polyp. Seven patients (12.3%) were addressed to surgery because of multiple recurrence. Ten patients (17.5%) were lost at follow up. In case of recurrence, the bronchial biopsy was always repeated and no malignant transformation was observed. No major complications, pneumothorax or pneumomediastinum occurred.

Conclusions: endoscopic treatment of benign tracheo bronchial tumors is safe and effective, provided that the procedure is carefully and systematically planned. The rate of eradication is satisfactory and the incidence of complications negligible. This will encourage this approach as first line treatment especially in patients, frequently elderly people, having increased surgical risk due to concomitant respiratory failure or major comorbidities.

© 2015 Elsevier Ltd. All rights reserved.

Keywords: Endoscopic treatment; Bronchoscopy; Benign tracheo-bronchial tumors; Case series

Introduction

Benign tracheo-bronchial tumors (BTTs) are rare, but potentially dangerous conditions that may obstruct a central airway with life threatening consequences and need for emergency care. Currently available data are provided by

* Corresponding author. Unit of Respiratory Pathophysiology and Thoracic Endoscopy, Campus Bio Medico University and Teaching Hospital, Via Alvaro del Portillo 200, 00128 Rome, Italy. Tel.: +39 06225411167, +39 06225411168; fax: +39 0622541456.

E-mail address: s.scarlata@unicampus.it (S. Scarlata).

anecdotic case reports^{1,2} or derived from databases focusing mainly on malignant neoplasms. According to the America National Cancer Institute, from 1973 to 2004 only 574 cases of primary BTTs have been reported in the USA with a likely conservative estimated incidence rate of 2.6 per 100.000 people.³

Tumor removal is considered the treatment of choice and should be pursued by methods minimizing the procedural stress.⁴ Conservative surgery such as sleeve resection or similar, is currently considered the elective therapy for peripheral lesions⁵; on the other hand, in centrally located benign tumors, surgery is often technically demanding for the surgeon and detrimental to the patient.⁶ Based on individual experience and good sense, amenable to endoscopic treatment seem tumors in which the distal margins can be endoscopically evaluated, those located from the tracheo-bronchial tree to the subsegmental bronchi and suitable for snaring and resection. The lesions should neither be broad based (flat, non polypoid, without a clear stalk or with a wide, not pedunculatus, one) nor extend across multiple cartilaginous rings and invade extramural tissues.⁷

After a successful endoscopic resection periodical endoscopic observation of the resection stump is necessary because recurrence or malignant transformations are not uncommon.⁸

We here report the 2000–2012 experience from a regional referral center in Rome, Italy. Fifty-seven consecutive diagnoses of BTTs were done and a systematic pre-operative evaluation and endoscopic approaches performed. Data on tumor location, macroscopic characteristics, demography and type of procedure were collected and analyzed, as also were the outcomes data, recurrence rates, need for further endoscopic intervention or for open surgery.

Case series-pre operative evaluation and endoscopic procedure

A contrast enhanced chest CT was systematically performed before the interventional evaluation; occasionally, 3D image reconstructions or PET-CT scan of the chest were obtained for further analysis. Radiologic finding of low attenuating (around 40H) or fat-rich (more than 80 H) masses, mostly confined within bronchial wall and not infiltrating the smooth muscle layer were considered as elective criteria to undergo bronchoscopic evaluation for excisional interventional rigid bronchoscopy. All these patients, likely or proved to have central airway benign tumor and candidate for endoscopic resection received a preliminary flexible video bronchoscopy for histologic determination, tumor site location and dimensional evaluation, severity of lumen obstruction and planning of the interventional procedure. Histological diagnosis was conformed to the WHO histological classification of lung tumors.⁹ We excluded from this series both typical and atypical carcinoids which are considered to be variously

invasive, although usually slowly growing, malignant tumors.¹⁰ Considering its not neoplastic nature, also amyloid lesions were not included in the case series.

Rigid bronchoscopy through a Harrel–Dumon device (Efer Medical, Cedex, France) was the approach chosen for most of the procedures. Only in six cases (fourteen procedures), characterized by peripheral, very small (less than 5 mm), pedunculated lesions, tumor resection by forceps was safely obtained with the flexible bronchoscope (but with the patient intubated by rigid bronchoscope). The rigid bronchoscopy procedure was performed with the patient undergoing deep sedation, if blood gases could be preserved, or, if not, general anesthesia. Photocoagulation and carbonization was obtained by a neodymium-doped yttrium aluminium garnet (YAG-Nd) laser probe (Smart 1064 DEKA, Florence, Italy) with high power ranging from 20 to 40 Watts. After an acceptable devascularization was achieved, a coring out mechanical technique was usually performed in order to debulk the lesion and provide a mechanical hemostasis at the base of the tumor, allowing for the removal of the lesion by forceps or basket through the operating channel of the rigid scope. When possible, the whole tumor was preserved and coring out was done by resecting the base of the pedunculus. The procedure usually ended with a further laser coagulation on the tumor scar.

Endoscopic control by flexible endoscopy was generally planned at 30, 90, and 360 days. The CT scan was usually repeated after six and twelve months. By that time patients were asked to undergo CT scan and bronchoscopy every three years unless they started complaining for respiratory symptoms in the meantime. Open surgery was considered if the tumor eradication was unsatisfactory due to persisting stenosis, very short recurrence time (within few weeks/months), relapse of respiratory symptoms or if more than three reinterventions were needed.

The whole protocol was approved by the Institutional Review Board at San Camillo-Forlanini Hospital in Rome.

Results

Over twelve years 15,120 endoscopic biopsies and 3598 rigid bronchoscopies were performed at the Thoracic Endoscopy Unit of the San Camillo-Forlanini Hospital in Rome between January 2000 and December 2012. Seventy-three BTTs were identified consistent with a biptic prevalence rate of 0.5%. All histological diagnoses, included those referred by other centers, were reviewed by a dedicated pathologist. Fifty-seven were addressed to endoscopic resection, but 15 to thoracic surgery because they were not pedunculated and CT scan showed a deep infiltration into the surrounding pulmonary parenchyma (2 cases) or involved more than three tracheal cartilages (2 cases) or were too distally located and/or too large (11 cases).

Download English Version:

<https://daneshyari.com/en/article/6191153>

Download Persian Version:

<https://daneshyari.com/article/6191153>

[Daneshyari.com](https://daneshyari.com)