



# Mucoepidermoid Carcinoma of the Carina

## Karinanın Mukopidermoid Karsinomu

Fadwa Allouche, Rajae Ennouichi, Fatima Zahra Terrab, Zineb Alami, Touria Bouhafa, Khalid Hassouni

Radiotherapy Department And Hassan II University Hospital Center Of Fez, Morocco

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### Abstract

Mucoepidermoid carcinomas are part of a rare group of malignant lung tumors. These tumors are most often found in young subjects. The growth of the tumor is usually endo-bronchial and concerns large bronchi. The histopathological appearance reveals cells producing mucus, epithelial cells and mixed cells. In this paper, we report the case of a 48-year-old man with a lateralized right lateral carcinoma tumor, which after endo-bronchial resection was found to be a pulmonary mucoepidermoid carcinoma. The patient underwent a complete excision of the hull enlarged tumor mass with angular section and V-plasty. She is currently in remission after a follow-up of 84 months. No standard treatment is defined for these tumors. The prognosis depends on the histological grade, and can, especially in the elderly, be very pejorative.

**Keywords:** Mucoepidermoid, carcinoma, carina

### Oz

Mukopidermoid karsinomlar, nadir görülen bir malign akciğer tümörü grubunun parçasıdır. Bu tümörler en sık genç denekte bulunur. Tümör büyümesi genellikle endo-bronşiyaldır ve büyük bronşlarla ilişkilidir. Histopatolojik görünüm, mukus üreten hücreleri, epitel hücreleri ve karışık hücreleri ortaya çıkarır. Bu yazıda lateralize sağ lateral karsinom tümörü olan 48 yaşındaki bir erkeğin endo-bronşiyal rezeksiyon sonrası pulmoner mukopidermoid karsinomu olduğu bulundu. Hastaya açılal kesit ve V-plasti ile gövde genişlemiş tümör kitlesinin tam eksizyonu yapıldı. 84 aylık takipten sonra hala remisyonunda. Bu tümörler için standart bir tedavi yoktur. Prognoz histolojik dereceye bağlıdır ve özellikle yaşlılarda çok küçük düşürücü olabilir.

**Anahtar Kelimeler:** Mukopidermoid, karsinom, karina

## INTRODUCTION

Muco squamous cell carcinoma is a malignant tumor usually occurring in the salivary glands. According to the World Health Organization, this tumor histopathologically is composed in different proportions of cells producing mucus, epithelial cells and mixed cells. Primary tumors of the salivary gland type are very rare in the thorax and constitute 0.1 to 0.2% of malignant lung tumors (1-2). The age of onset is between three months and 78 years with an average age of 40 years. The treatment of choice is surgical removal. Complete resection of tumors of low-grade malignancy ensures a favorable prognosis; on the other hand, tumors of high grade of malignancy more often give a local recurrence associated with a high metastatic risk (3). In this work, the authors report the case

of a 48-year-old man treated for an endo-bronchial tumor that was found to be a low-grade malignant bronchial carcinoma of the bronchial carcinoma.

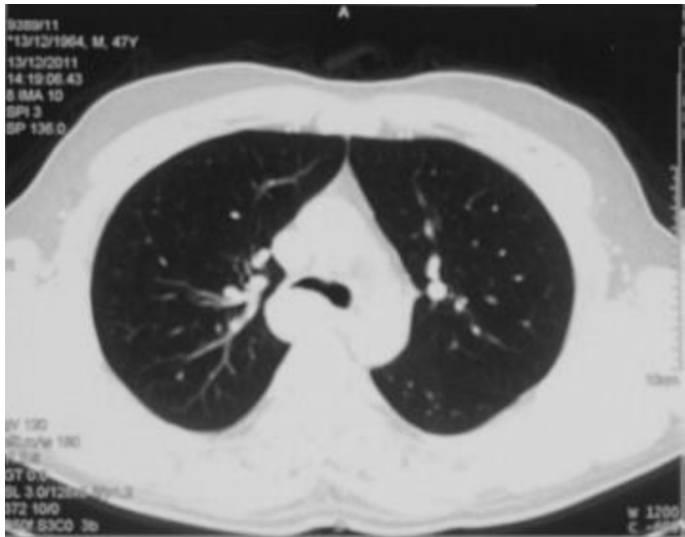
## CASE PRESENTATION

This is a Mr XY aged 48, chronic smoking with occasional ethylism and no personal or family neoplastic antecedent. The symptomatology dates back to 5 months before admission by the installation of a right thoracic pain resistant to the usual analgesic treatments, associated with a dry cough and episodes of hemoptysis of low abundance. Everything evolves in a context of slimming without encryption. Thoracic computed tomography showed post-lateralized carini mass tissue to the right of tissue density, enhancing after 16x12x7mm contrast

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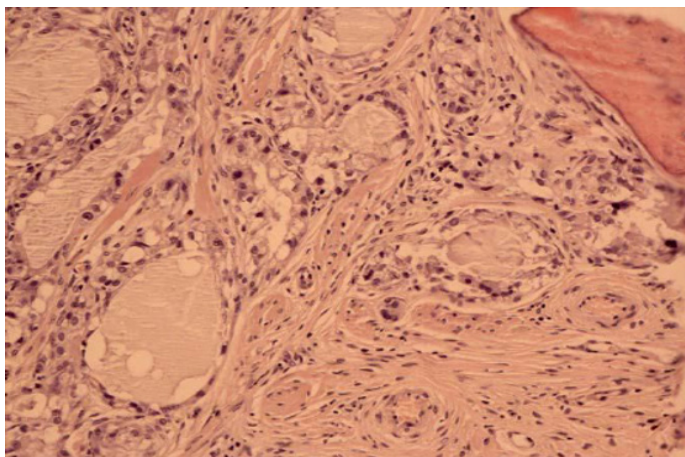
Sorumlu Yazar /Corresponding Author: Fadwa Allouche, Radiotherapy Department and Hassan II University Hospital Center of Fez, Morocco, E-mail: dr.allouch.fadwa@gmail.com

medium intimately surrounding the azygos bronchus, without mediastinal adenopathies (Figure 1), thoracic MRI revealed a mass retrocarinar mediastinum. The preoperative extension assessment was normal.



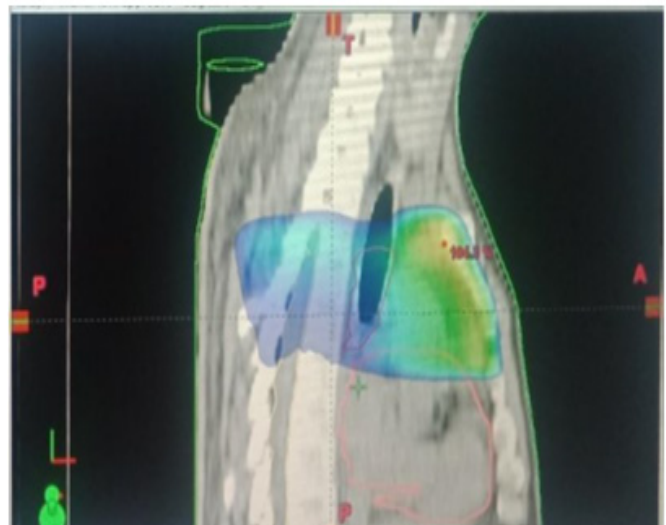
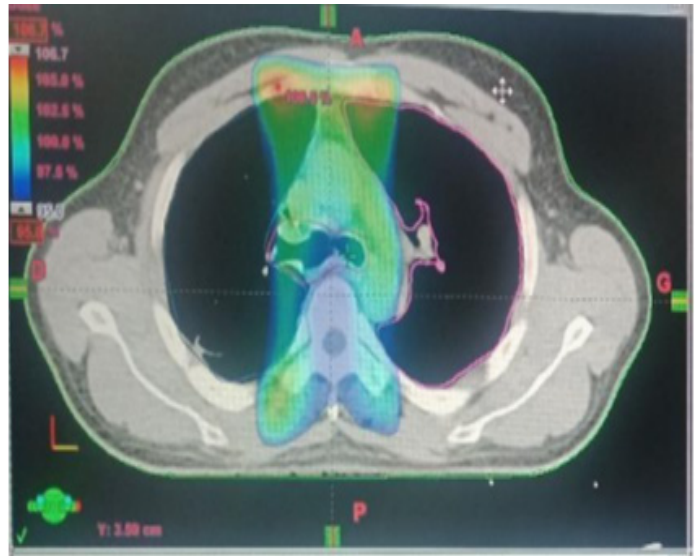
**Figure 1.** thoracic computed tomography showing a retrocollated tissue mass lateralised to the right of tissue density intimately surrounding the azygos bronchus

Bronchoscopic bronchoscopy was performed under general anesthesia and the histopathological analysis of the specimens was non-contributory. In order to confirm the histological nature of this mass, whose tumor origin is very likely, a thoracotomy for diagnostic and therapeutic purposes was performed posterolaterally, allowing complete excision of the enlarged tumor mass at the hull with angular section and plasty. The postoperative diagnosis was in favor of a non-small cell lung carcinoma of the muco-epidermoid histological type classified as having a low grade of malignancy (Figure 2). In spite of the fact that the cut is healthy during surgery and that the tumor fuse posteriorly and is doubtful about taking this extension entirely in the cut, adjuvant radiotherapy has been indicated.



**Figure 2.** Mucoepidermoid carcinoma - histopathological appearance (hematoxylin eosin x 200)

The patient received a TEN on the tumor bed: 50 Gy in 25 sessions of 2 Gy over 5 weeks with good tolerance, The 84-month follow-up.



**Figure 3.** Dosimetric study of mucosal squamous cell carcinoma of the carina on 3mm axial scan sections passing through the carina and the bronchial tubes

## DISCUSSION

Bronchial mucoepidermoid carcinoma was first described in 1952 by Smetana et al (4-5), but it must be taken into account that the diagnostic means of the 1950s probably did not allow the distinction between muco-epidermoid tumor, primitive or secondary. Since then, we find descriptions of isolated cases or collected in small series. About 1 to 5% of endo-bronchial adenomas appear to be mucoepidermoid carcinomas (5-6). In the majority of cases, as described above, this type of neoplasia is found in the large airways: bronchial tubes, lobar bronchi, segmental bronchi; they are found exceptionally in the distal bronchial tree (1-5-7). In our study mucoepidermoid carcinoma is found in the right bronchus strain.

The symptoms observed are related to airway obstruction and may be in the form of pneumonia, chronic cough, dyspnea, wheezing or hemoptysis (1,3,6). In the literature, coexistence of this disease is sometimes reported with congenital agenesis of a pulmonary lobe (5-8). Our patient had a dry cough, dyspnea on exertion and two episodes of haemoptysis. Because of the location of the tumor, which is usually central, standard radiography usually shows no signs of abnormality until complications such as lobar pneumonia or atelectasis appear (9). On tomodensitometric examination, it is possible to discover an oval opacity, well limited, of lobular aspect; the enhancement of nodules after injection of contrast medium is rather moderate and can be found punctate calcifications (5-8). Mucoepidermoid carcinoma is rare at the bronchial level, so the possibility of pulmonary metastases of primary tumors of the salivary glands must be taken into account. In our case, thoracic CT showed a posterior retrocollated tissue mass right tissue density intimately surrounding the azygous bronchus.

Given the localization, the diagnostic examination of choice is flexible bronchoscopy (3-6). Nevertheless, since the localization is very often submucosal and the histological aspect resembles the other endobronchial pathologies, the diagnosis based on superficial samples can give inaccurate information. The rarity of the tumors, the history, the macroscopic appearance and the limited size of the biopsies can influence the diagnosis made by the anatomopathologist. There are two histological forms of mucoepidermoid carcinoma of the lung. In 95% of cases, they are tumors of low grade of malignancy. They are characterized by a rather low rate of local and systemic recurrences; the five-year survival rate in this group is 80%. The high-grade form of malignancy with a five-year survival rate of 30% is often difficult to differentiate from adenosquamous bronchial cancers (5-8).

Surgical removal of the tumor appears to be the most effective means of treatment for this type of neoplasia and achieves a high level of survival (several years) without local recurrence and without distant metastases (5-8). In case of incomplete resection, postoperative

radiotherapy can be performed for the purpose of locoregional control, but there is no clinical trial on the benefit of this postoperative radiotherapy (9). The treatment of inoperable or relapsed metastatic forms is not codified and relies on paclitaxel-based systemic chemotherapy with low sensitivity to platinum salts. The advent of targeted therapies has opened the door to a cure for inoperable forms. Mararenco found strong expression of EGFR on 12 bronchial CMEs and one trial tested cetuximab (monoclonal antibody targeting the extracellular domain of EGFR) in combination with platinum-based chemotherapy on 22 salivary gland tumors. CME, the response rate was about 50% at 6 months. Hyperexpression of HER 2 is found in 21% of CMEs with some cases of trastuzumab stability, but at present there is no chemotherapy or targeted therapy that has been shown to be effective in the treatment of bronchial CME (10).

Low-grade tumors should be treated as conservatively as possible, as opposed to high-grade tumors with a pejorative course (11). In our case, the patient underwent a complete excision of the enlarged tumor mass with angular section and V plasty, even if it is classified as low grade malignancy. So far, there is no sufficient scientific data to confirm the efficacy of treatment of Mucoepidermoid Carcinoma of the lung by radiotherapy and chemotherapy.

## CONCLUSION

Mucoepidermoid carcinomas are rare endo-bronchial tumors. The radio-clinical presentation is nonspecific. No standard treatment is defined for these tumors. The prognosis depends on the histological grade, and can, especially in the elderly, be very pejorative hence the need to discuss the therapeutic management of CPR and the census of these rare tumors must be made within the framework of the taking into account. charge of orphan tumors.

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## ORCID ID

Fadwa Allouche, Orcid: 0000-0001-9440-0723

Rajae Ennouichi, Orcid:0000-0002-1518-1989

Fatima Zahra Terrab, Orcid: 0000-0001-6508-5066

Zineb Alami, Orcid: 0000-0002-7071-2359

Touria Bouhafa, Orcid: 0000-0002-9857-1594

Khalid Hassouni, Orcid: 0000-0002-8258-2360

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