



(CASE REPORT)



## Unusual finding in a diagnostic bronchoscopy of a patient with brain metastatic lung cancer

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### Abstract

Swallowing disorders are common manifestations in patients with advanced lung cancer, this paper describes a rare clinical case of a foreign body (chicken bone) accidentally found in the lumen of the left upper lobe bronchus during bronchoscopy.

A 41 year- old man, with smoking history of 20 PA presented to our department with paraplegia and left arm paresis, he complained over 6 months from dyspnea, increasing posterior chest pain and persistent dry coughing. He had a history of swallowing disorders and difficulties with shocking episode passed unnoticed. The patient was afebrile but presented weight loss and weakness. On physical examination, he had a digital hippocratism, a WHO performance status was at 4 and there were diffuse snoring rales on pulmonary auscultation.

The body CT scan showed a voluminous left upper mediastinal tumor involving the left upper lobe and the left apical pyramidal lobe, this tumor was extended to vascular elements and to the dorsal spine. The cerebral CT scan showed discreetly a compressive right parietal process measuring 3cm\*3cm.

The flexible bronchoscopy has been performed showing an extrinsic compression of the posterior wall of the trachea, a blood clot removed showing a piece of chicken bone presented in the lumen of the anterior segmental bronchus. The patient was referred to the oncology department for palliative treatment, after being diagnosed as lung adenocarcinoma by a CT guided lung biopsy.

This is the first paper reported an accidentally discovery of bronchial foreign body during bronchoscopy in a patient with stage IVB lung cancer.

Dysphagia has been reported as common manifestation in patients with advanced lung cancer due to underlying mediastinal disease and brainstem lesions metastasis, it is considered as a disorder which may increase the risk of morbi-mortality and has a potential of life-threatening.

**Keywords:** Advanced lung cancer; Dysphagia; Bronchoscopy; Foreign body

### 1. Introduction

Lung cancer is the most common malignant tumor in men with high mortality around the world, it is often diagnosed at an advanced stage. Tobacco smoking remains the predominant risk factor for lung cancer development [1, 2]. Although

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respiratory symptoms predominate, important number of patients have experienced dysphagia, this clinical symptom was related most commonly to mediastinal disease or to the brainstem metastasis.

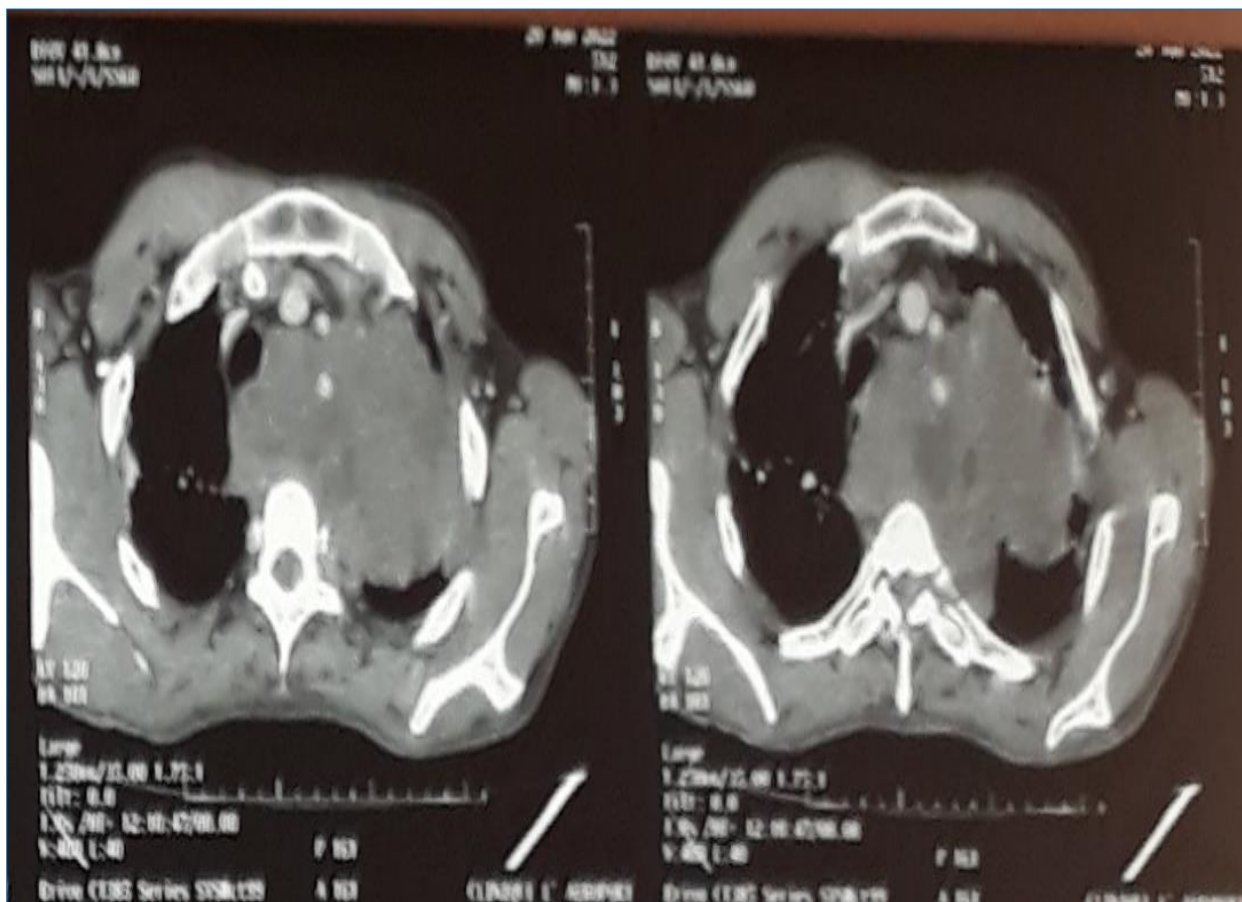
We report the case of 41 year old man who presents advanced lung adenocarcinoma with brain metastasis, and whom the bronchoscopy was revealing fortuitously a chicken bone foreign body in the left upper lumen bronchus.

## 2. Case-Report

A 41 year old man, with smoking history of 20 PA presented to our department with metastatic advanced lung cancer ,the patient had developed within one week a paraplegia and left arm paresis , he complained over 6 months from dyspnea, increasing posterior chest pain and persistent dry coughing. Furthermore, the patient had a history of swallowing disorders and dysphagia with shocking episode passed unnoticed. He was afebrile but presented weight loss and weakness.

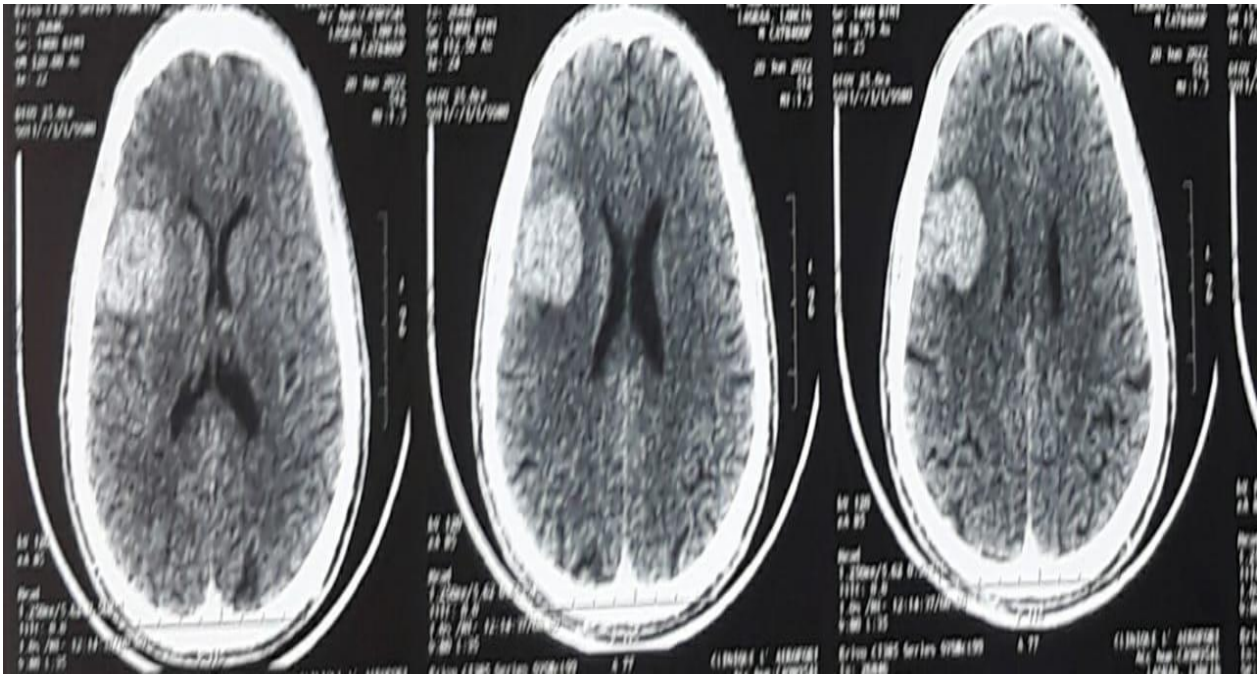
On physical examination, the patient was conscious, dysphonic, he was dyspneic with orthopnea, afebrile at 37°C, he had a peripheral saturation to the ambient air at 92%. He had a digital hippocratism, and his WHO performance status was at 4 . Pulmonary auscultation found diffuse snoring rales.

The thoracic CT scan with enhanced contrast and the body scan showed a locally invasive, heterogeneous, dense tissue lesion realizing a voluminous left upper mediastinal tumor measuring 12.7\*10.6\*10.9 cm., this mass involved the left upper lobe and the ipsilateral apical pyramidal lobe, it infiltrates the superior and medium mediastinum, it invades the left upper intercostal spaces, and erodes the two left upper ribs, this tumor was associated to mediastinal adenomegalies, bilateral emphysema and bilateral low abundance pleural effusion. it was extended to the vessels and invades the dorsal spine bone ( figure 1).



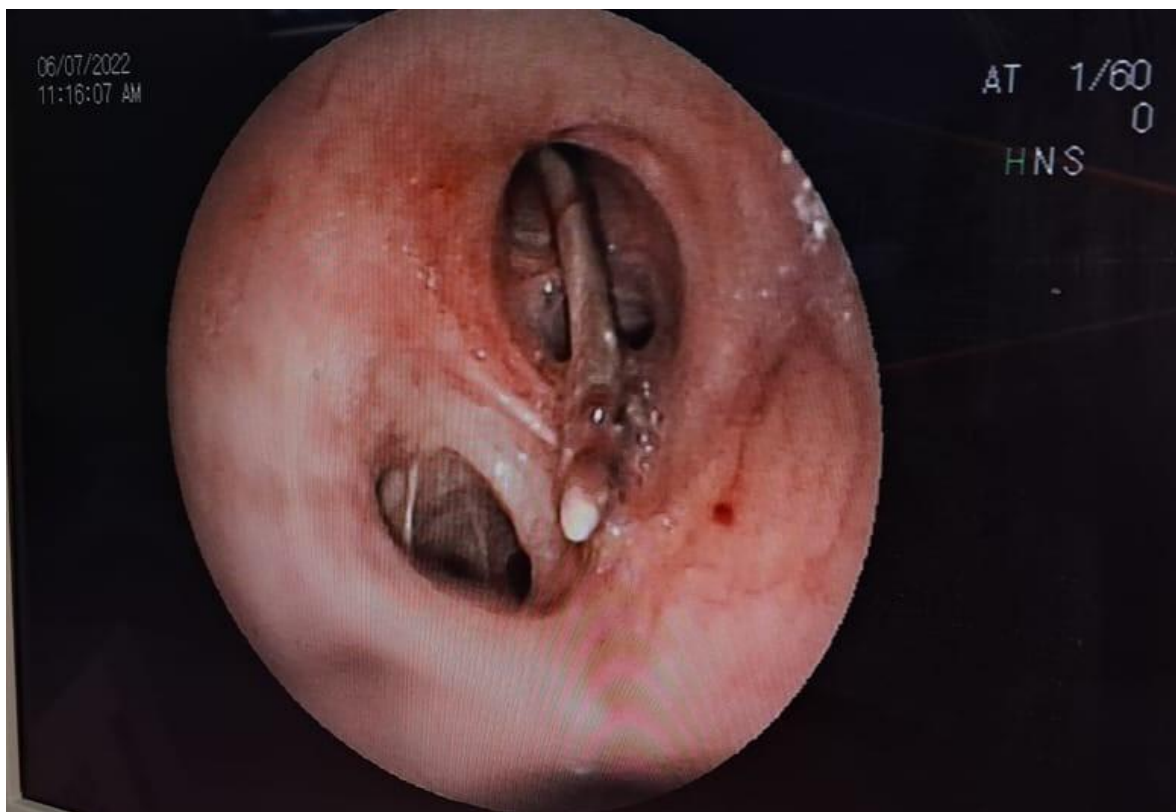
**Figure 1** Axial thoracic CT scan showing the voluminous infiltrating mediastinal tumor

The cerebral CT scan showed a discretely compressive right parietal process measuring 3cm\*3cm (figure 2).



**Figure 2** Cerebral CT scan showing the lesional parietal process metastasis discretely compressive

A flexible bronchoscopy has been performed showing a paralytic left vocal cord, an extrinsic compression of the posterior wall of the trachea, a blood clot removed showing a piece of chicken bone presented in the lumen of the anterior segmental bronchus ( figure 3).



**Figure 3** Endoscopic view of the foreign body (chicken bone) in the lumen of anterior segmental bronchus (left bronchus segmentation)

Lung and mediastinal lymph node biopsy confirmed the diagnosis of adenocarcinoma lung cancer. The patient was referred to the thoracic surgery department to remove the bronchial foreign body and to the oncology department for palliative treatment.

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### 3. Discussion

Lung cancer, the most common cause of cancer deaths in the world, can have a substantial negative impact on quality of life through its effects on breathing, voice, and swallowing. Dysphagia (swallow dysfunction) has been described in 12–68% of prior lung cancer studies, and mostly reported in patients with advanced lung cancer [3].

Dysphagia can occur due to several possible mechanisms: most commonly by extrinsic compression of the pharynx, upper oesophagus or recurrent and vagus nerve within the cervical lymphnodes, or compression of the oesophagus within the mediastinal tumor, by direct tumour invasion of oesophagus. More infrequently, oesophagus stenosis due to radiotherapy. The co-morbid conditions may also cause or compound dysphagic symptoms, notably hypercalcemia in paraneoplastic syndrome which effect gastrointestinal motility. Either, this symptom can be caused by brainstem metastasis due to cranial nerve palsies [4].

Our patient had stage IVB lung adenocarcinoma with Pancoast et Tobias syndrom, dorsal medulla compression and brain metastasis.

In our case, it is clear that the mediastinal tumor compression, left hemiralyngal paralysis, were the causes of swallowing accident aspiration in our patient.

Marmor's and al studies, suggested that dysphagia is associated with a significantly decreased survival in patients with lung cancer, independent of other important disease and patient characteristics [5]. This may be mediated through weight loss, which has been shown to be associated with worse survival in patients with lung cancer [6].

Grainne C. Brady and al have determined the impact of dysphagia on quality of life in patients with advanced lung cancer, and reported that compromised quality of life was noted with increased fatigue and meal time duration, difficulties with food selection and reduced eating desire. Frequent throat clearing, coughing and perceived pharyngeal stasis [7].

In our case, dysphagia and swallowing disorders were not the main complaints of our patient, the shocking episode of aspiration accident was neglected by patient and his surroundings, and it was only at the bronchoscopy exam that this accident was discovered. Thus, our patient was more exposed to the risk of sudden death or the risk of infectious pneumopathy complications.

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### 4. Conclusion

The main challenge imposed by lung cancer on public health is its poor prognosis because of the advanced stage time diagnosis.

Dysphagia is a fatal potential symptom in advanced lung cancer which may impact QOL and may increase the risk of morbi-mortality. Our case highlights the need of being aware of this symptom by Patients, carers and healthcare professionals so that early diagnosis and prompt treatment may improve the prognosis of this disease.

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### Compliance with ethical standards

#### *Acknowledgments*

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#### *Disclosure of conflict of interest*

The authors declare no conflict of interest.

### *Statement of informed consent*

Permission to conduct the study was obtained from Department of Pneumology, ARRAZI Hospital, Mohamed VI University Hospital Center, Marrakesh. Informed consent was obtained from the patient included in the study. The patient information was be kept confidential during and after study period.

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### **References**

- [1] Ferlay, J., Soerjomataram, et al. (2015). Cancer incidence and mortality worldwide: sources, methods and major patterns in GLOBOCAN 2012. *International journal of cancer*, 136(5), E359-E386.
- [2] Ray F, Ferlay J, Soerjomataram I, et al. Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA Cancer J Clin* 2018, 68 (6):394–424.
- [3] Brady GC, Roe JWG, O'Brien M, Boaz A, Shaw C. An investigation of the prevalence of swallowing difficulties and impact on quality of life in patients with advanced lung cancer. *Support Care Cancer* 2018, 26(2):515–9
- [4] Hassan WA, Darwish K, Shalan IM, Elbaki LA, Elmohsen EA, Sayed WH. Aetiologic mechanisms of dysphagia in lung cancer: a case series. *Egyptian J Chest Dis Tubercul* 2014, 63 (2):435–42).
- [5] Marmor S, Cohen S, Fujioka N, Cho LC, Bhargava A, Misono S. Dysphagia Prevalence and Associated Survival Differences in Older Patients with Lung Cancer: a SEER-Medicare Population based Study *J Geriatr Oncol*. 2020 September, 11(7): 1115–1117. doi:10.1016/j.jgo.2020.02.015).
- [6] Yang R, Cheung MC, Pedroso FE, Byrne MM, Koniaris LG, Zimmers TA. Obesity and weight loss at presentation of lung cancer are associated with opposite effects on survival. *J Surg Res* 2011, 170 (1):e75–83.
- [7] Grainne C. Brady, Justin W. G. Roe, Mary O' Brien, Annette Boaz and Clare Shaw. An investigation of the prevalence of swallowing difficulties and impact on quality of life in patients with advanced lung cancer. *Supportive Care in Cancer*, 2018, 26, 515-519.