Case Report

iMedPub Journals
http://www.imedpub.com

Head and Neck Cancer
ISSN 2572-2107

2021
Vol. 6 No. 2.28

Choroidal Metastasis Indicative of Bronchial Adenocarcinoma: Case Report

Dohoué Patricia Eliane Agbanglanon[1*], Gloria Akimana[2], Evrard Seka[1], Gaël Kietga[1], Siham Jaba[1], Sanaa Elmajjaoui[1], Tayeb Kebdani[1], Hanan Kacemi[1], Ibrahim EL Ghissassi[2], Hanae Bakkali[1], Noureddine Benjaafar[1]

[1]Department of Radiotherapy, National Institute of Oncology, Rabat, Morocco

[2]Department of Oncology, National Institute of Oncology, Rabat, Morocco

[*]**Corresponding author:** Agbanglanon DPE, Department of Radiotherapy, National Institute of Oncology, Rabat, Morocco, E-mail:patriciaagbanglanon@yahoo.fr

Received date: January 19, 2021; **Accepted date:** February 02, 2021; **Published date:** February 09, 2021

Citation: Agbanglanon DPE, Akimana G, Seka E, Kietga G, Jaba S, et al. (2021) Choroidal Metastasis Indicative Of Bronchial Adenocarcinoma: Case Report. Head Neck Cancer Res. 6(2).

Abstract

Primary bronchial cancer is the leading cause of choroidal metastases (CM) in humans. The discovery of CM is generally made during the course of the disease, often at advanced stages. Exceptionally, CM can be indicative of bronchopulmonary cancer as in this case. We report the case of 33-years-old women with no particular pathological history, who presented a rapid decline in visual acuity. Chemotherapy was used to allow regression of the lung tumor and CM.

Keywords: Lung cancer; Choroidal metastasis

Introduction

The most common metastatic sites for bronchopulmonary adenocarcinomas are the pleura, liver, bones, adrenal glands and central nervous system [1]. Choroidal metastases (CM) in non-small cell lung cancer (NSCLC) are rare [2]. Their frequency has increased in recent years due to the longer survival of affected patients [3]. However, their diagnosis is usually made at an advanced stage of the disease, usually during the evolutionary surveillance of the primary tumor. Exceptionally, these choroidal metastases can be revealing as in the case we report.

The most common metastatic sites for bronchopulmonary adenocarcinomas are the pleura, liver, bones, adrenal glands and central nervous system [1]. Choroidal metastases (CM) in non-small cell lung cancer (NSCLC) are rare [2]. Their frequency has increased in recent years due to the longer survival of affected patients [3]. However, their diagnosis is usually made at an advanced stage of the disease, usually during the evolutionary surveillance of the primary tumor. Exceptionally, these choroidal metastases can be revealing as in the case we report.

Clinical Case

A 33-years-old woman, single, a teacher by profession, non-smoking, no ophthalmological history. She has had a decrease in visual acuity in her left eye for the past 07 months, which has been accentuated by eye pain for the past 04 months. It was associated with respiratory discomfort, unexplained fatigue and right axillary adenopathy with headaches rebelling against analgesics, which motivated a consultation with an ophthalmologist.

Visual acuity was 10/10 in the right eye and 1/10 in the left eye. A retinography scan shows areas of exuding lesions at the posterior pole and papilla (**Figure 1**). Retinal angiography reveals the presence of hyperfluorescent images increasing in intensity at different angiographic times in relation to the lesions and neovasal vessels (**Figure 2**). Cerebral MRI reveals a posterior temporal choroidal lesional process of the left eyeball in T1 isosignal, T2 hyposignal enhanced intensely after contrast injection. It is accompanied by retinal detachment with supraretinal hemorrhage in hypersignal T1 and T2 (**Figure 3**). The optic nerve and the right muscles are not injured. No notion of cerebral metastasis. A chest and abdominal CT scan shows a huge lung mass of the right upper lobe with homolateral pulmonary parenchymal micronodules and right mediastinal and axillary adenopathy (**Figure 4**). A CT-guided lung biopsy performed reveals primary bronchopulmonary adenocarcinoma of the acinar type. Mutation tests, Epidermal growth factor receptor (EGFR), anaplastic large-cell lymphoma kinase (ALK) and Programmed death-ligand 1 (PDL1) are negative. A first chemotherapy was decided after a multidisciplinary consultation meeting (MCM) between oncologists and radiotherapists. She was placed on

paclitaxel 175 mg/m2/daily and carboplatin AUC5 chemotherapy as palliative, orbital lesions being considered metastatic. Evolution after three months was marked by the persistence of the pulmonary mass and recovery of the sight.

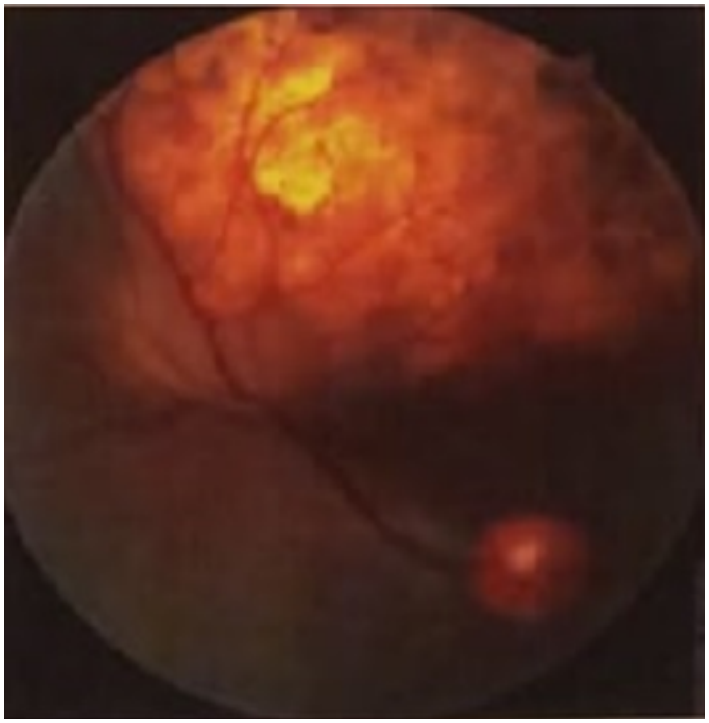

Figure 1 Retinography shows areas of exuding lesions at the

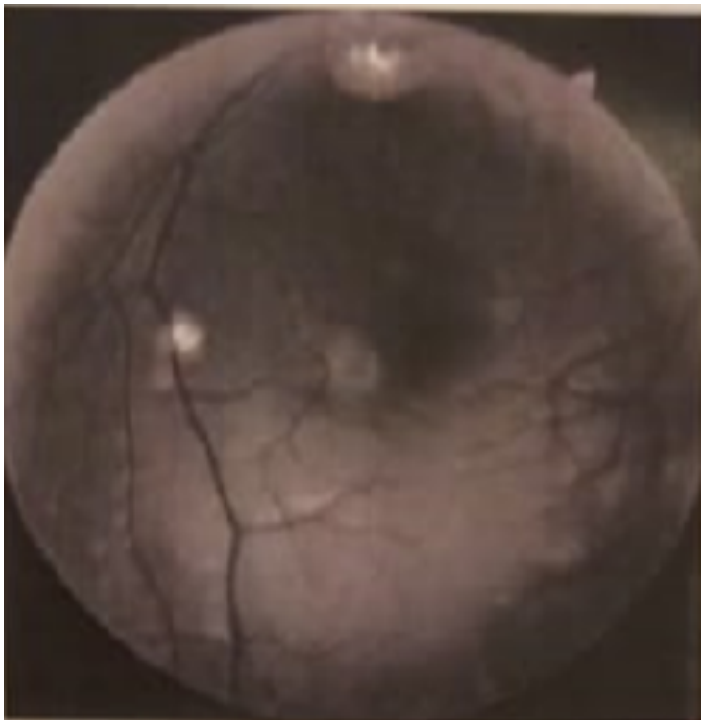

Figure 2 Retinal angiography which reveals the presence of hyperfluorescent images increasing in intensity at different angiographic times in relation to lesions and neovasal vessels.

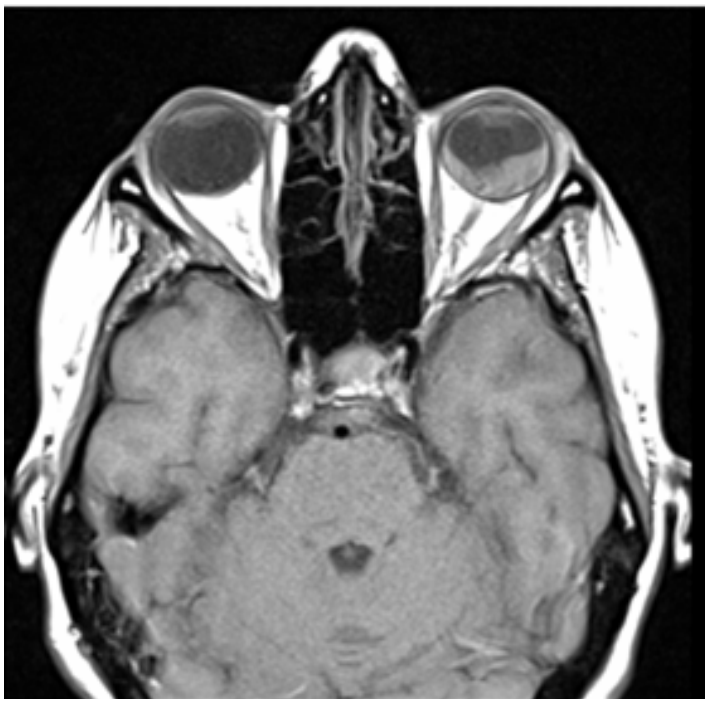

Figure 3 Orbitocereberal MRI : Posterior temporal choroidal lesion process of the left eyeball

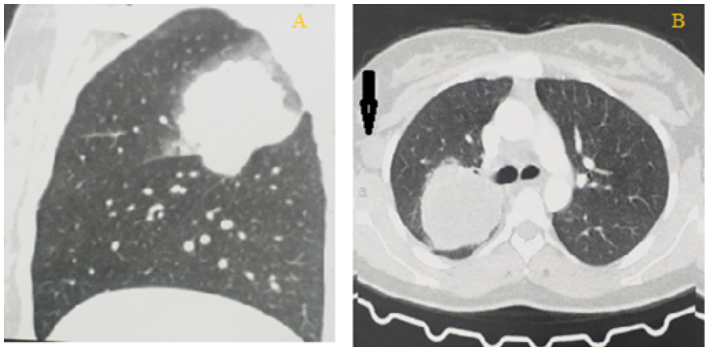

Figure 4 Thoracic CT scan shows a right upper lobe lung mass with homolateral pulmonary parenchymal micronodules and right mediastinal and axillary adenopathy (A and B)

Discussion

All ocular metastases are rare. The origin of the metastasis remains unknown in approximatively 10% of all cases[4]. The choroid with is the vascular membrane between the retina and the sclera, is the most common metastatic site in the eye. In the study by Shields et al. [5], choroidal metastases account for 88% of all ocular metastases. In bronchial cancer, its frequency, probably underestimated, would be about 0.7 to 18% when screening is systematic, but autopsy studies report 6 to 31.6%, of which 60% are asymptomatic [6]. This prevalence should increase in the coming years with the progressive increase in the survival time of patients with bronchopulmonary cancer and could be higher if more frequent and earlier screening were carried out [7]. These choroidal metastases appear in some series as the sixth most common secondary location after the brain, bone, liver, lung, and lymph nodes [8]. The mode of dissemination

could be hematogenous, which would explain the preferential involvement of the choroid compared to the anterior uvea, the optic nerve and the orbit [5].

However, CM is rarely a circumstance in which cancer is discovered [2,4]. Shields et al. studied 520 cases of ocular metastases in 420 patients recruited over a 20-years in an ophthalmologic oncology department. They found that they were indicative of neoplasia in 142 patients, corresponding to seven new cases per year. The most frequent location of ocular metastases is the choroid, affected in 92% of eyes, followed by the iris (8%) and the ciliary bodies (4%) [5]. When choroidal metastases are symptomatic, they occur in generalized neoplasia, where they coexist in 60 to 91% of cases with metastases of other organs, as in our case [8]. Usually, the discovery of CMs is made at an advanced stage of a known PBC. However, it may exceptionally occur before the discovery of primary bronchial cancer [5]. Sometimes CMs occur in the absence of any apparent brain metastasis.

Clinically, in 80 to 88% of cases the warning signs are metamorphopsies or a decrease in visual acuity if the posterior pole is affected, and orbital pains in 16% of cases [9,10].

The diagnosis is evoked on the characteristic aspect of the fundus [4]. The lesion, yellowish beige in color, is flat and infiltrative, with ill-defined or domed edges. It may be associated with secondary retinal serous detachment, as in our case. In the case of lung cancer, the lesion is unifocal and unilateral in 64% of cases [4,5], as in our case.

Retinal angiography as well as ocular ultrasound can, in some cases, help in diagnosis (5). On MRI, metastases appear relatively hyperintense compared to the vitreous in T1 and relatively hypo-intense in T2. Biopsy of the choroidal lesion is indicated when the tumor is isolated, unique, and in the absence of obvious primary neoplasia [4].

In a patient with PBC, the diagnosis of choroidal metastasis is usually based on a combination of clinical and radiological arguments. Ocular retinal angiography, ultrasound and MRI visualize non-specific retinal lesions. Ocular CT scan, even with its image reconstruction techniques, does not allow analysis of the choroid and therefore screening for CM. In practice, retinal biopsies are not performed because of their difficulty and the risk of retinal injury [11].

The basis of the treatment of CM is radiotherapy at a dose of 30 Gy by fractionation of 2 to 5 Gy. Usually, its action is rapid and effective on the initial ocular symptoms. If necessary, it allows a complete recovery of visual acuity [12]. With the advent of new generations of molecules, chemotherapy could be attempted as a first-line treatment for choroidal metastases of NSCLC, allowing the simultaneous treatment of primary cancer and choroidal metastases without the need for ocular radiotherapy [2]. Thus, for this patient, the choice was made to use first-line chemotherapy to treat primary and CM. Takano et al [2] had previously reported a partial response of choroidal metastases to systemic chemotherapy in poorly differentiated squamous cell carcinoma of the bronchus. Possible radiotherapy of choroidal lesions could be given without delay if chemotherapy fails [2].

Different authors have used targeted therapy, especially anti EGFR in combination with chemotherapy. Doses ranging from 1.25 to 2.5 mg/injection have been used for intravitreous injections at a rate of 15 to 60 days. In this study, metastases disappeared after a total of 2 to 14 injections. Unfortunately, this protocol could not be used in this patient who has an un-mutated EGFR status.

It should be noted that no brain metastases have been observed in the clinical case that we present. However, there seems to be an association between cerebral metastases and choroidal metastases. Indeed, the association of choroidal metastases with cerebral localizations during metastatic bronchial cancers is frequent [8]. Hence, the interest of the search for secondary cerebral localizations in case of choroidal metastases.

Conclusion

The discovery of an isolated choroidal tumor should evoke metastasis in the first place with an investigation to find the primary tumor. In patients with PBC, the appearance of visual disturbances should suggest the possibility of CM. Ocular radiotherapy is often effective for these disabling eye disorders, and helps to improve, in part, the quality of life of these patients. Chemotherapy remains a significant weapon in the treatment of these metastases.

References

1. Jardel P, Caujolle J P, Gastaud L, Maschi C, Sauerwein W, et al. (2015) Malignant tumors ophtalmologiques : Radiotherapy indications and techniques. Can/Radioth 19(8):762-774.
2. Battikh MH, Ben Yahia S, Ben Sayah MM, Maatallah A, Joobeur S, et al. (2004) Choroidal metastases indicative of bronchial and involutional adenocarcinoma under chemotherapy. Rev Pneumol Clin 60(6): 353-356.
3. Tazi N, Le Thi Huong D, Bodaghi B, Rixe O, Lehoang P, et al. (2006) Choroidal metastasis revealing a bronchial adenocarcinoma. Rev Internal Medi 27(9): 699-701.
4. Masson E. Bilateral choroidal metastases indicative of disseminated cancer [Internet]. EM-Consult. cited August 24, 2020].
5. Shields CL, Shields JA, Gross NE, Schwartz GP, Lally SE (1997) Survey of 520 Eyes with Uveal Metastases. Ophthalmol 104(8): 1265-1276.
6. Eliassi-Rad B, Albert DM, Green WR (1996) Frequency of ocular metastases in patients dying of cancer in eye bank populations. Br J Ophthalmol. 80(2): 125-128.
7. Assouline P, Bussiere A, Thiellet A, Humbert M, Oliviero G

(2004) Choroidal metastases of bronchopulmonary cancers. Rev Mal Respir 21(6): 1153-1156.

8. Kreusel KM, Bechrakis NE, Wiegel T, Krause L, Foerster MH (2008) Incidence and clinical characteristics of symptomatic choroidal metastasis from lung cancer. Acta Ophthalmol (Copenh). 86(5): 515-519.
9. Tsina EK, Lane AM, Zacks DN, Munzenrider JE, Collier JM, et al. (2005) Treatment of metastatic tumors of the choroid with proton beam irradiation. Ophthalm 112(2): 337-343.
10. Finger PT, Marin JP, Berson AM, Kedhar S, McCormick SA (2003) Choroidal metastasis from adenoid cystic carcinoma of the lung. Am J Ophthalmol 135(2):239-241.
11. Abundo RE, Orenic CJ, Anderson SF, Townsend JC (1997) Choroidal metastases resulting from carcinoma of the lung. J Am Optom Assoc 68(2):95-108.
12. Wiegel T, Bottke D, Kreusel KM, Schmidt S, Bornfeld N, Foerster MH, et al. (2002) External beam radiotherapy of choroidal metastases final results of a prospective study of the German Cancer Society (ARO 95-08). Radiother Oncol J Eur Soc Ther Radiol Oncol 64(1):13-18.