

## Late Hepatic Metastases of Choroidal Melanoma: A Case Report

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### Abstract

Choroidal melanoma is the most common primary malignant tumour of the adult eye. Metastatic spread occurs years after curative treatment. The main site is liver metastases, hence the importance of long-term surveillance. We report on a patient who was diagnosed late 4 years after curative treatment, at the age of 53 years, and whose reason for consultation was typical hepatic colic, hence the need for long-term surveillance for secondary locations, specifically liver metastases.

**Keywords:** Liver metastasis, choroidal melanoma.

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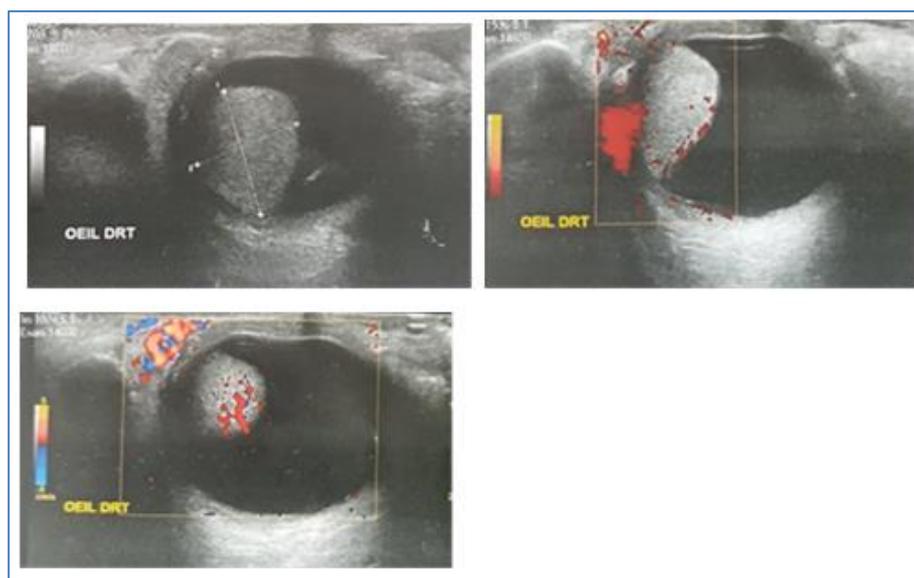
### INTRODUCTION

Choroidal melanoma is the most common primary malignant tumour of the adult eye. Almost 2534 new cases per year (5 per million) occur in France [1]. Metastatic spread occurs in 50% of cases, several years after curative treatment. The main site in 90% of cases is liver metastases, hence the importance of long-term surveillance. The relative survival at 5 years was 68.9% in France and higher in UK-Ireland (72.6%-73.4%) [1]. We report a case of liver metastasis of

choroidal melanoma, managed in medicine C, from the University Hospital of Rabat, Morocco.

### CLINICAL CASE

53 year old patient operated in 2017 for choroidal melanoma of the right eye, initially non-metastatic. Measuring 19 mm in diameter and 15 mm thick (mitotic index 5 mitoses/10 fields at high magnification, field diameter 0.55. pTNM classification : T4aNx) with an ocular prosthesis in place ; chronic smoker 10 pack-years weaned 08 years ago.



**Fig-1: Homogeneous hyperechoic inferior temporal choroidal melanoma, vascularized on Doppler measuring 13mm\*1mm.**

He was admitted to our facility on January 2021 (4 years later) for typical hepatic cholera. The clinical examination revealed a patient in good general condition (WHO 0). Abdominal examination showed hepatomegaly (right and left) at 18 cm, sharp anterior border, regular and painful surface, without splenomegaly, ascites or peripheral adenopathies. Mucocutaneous examination and dermatoscopy

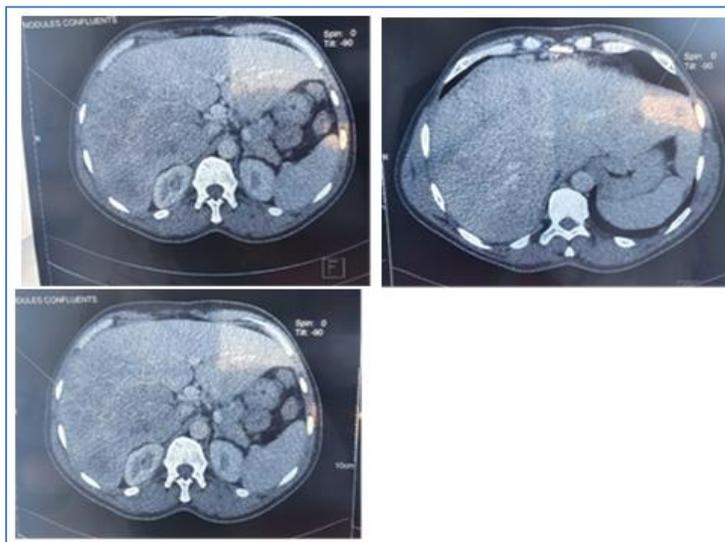
revealed a blue naevus on the scalp (benign), a dermal naevus on the nasolabial fold (benign) and multiple nevi, and a ruby angioma on the trunk (benign). Abdominal ultrasound with Doppler showed an enlarged liver, regular in outline, homogeneous, with a hypochoic image and a cauliflower-like hyper-echoic plaque in segments V, VI and VII at 10 mm ; there was no evidence of portal hypertension.



**Fig-2: Abdominal ultrasound: liver with multiple nodular formations**

The abdominal angioscanner showed an enlarged liver (FH 20 cm), with regular contours, the site of several bi-lobular hepatic nodules, hypodense, intensely heterogeneously enhanced after injection of PDC at the arterial time with Wash out at the portal and late time. 04 nodules on the left, the largest measuring 17 mm and multiple confluent nodules in the right liver creating a pseudo mass, engulfing the portal branches of

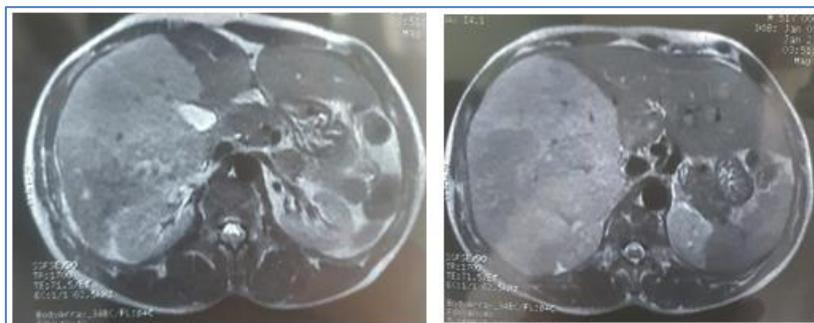
segments VII and VIII and the right hepatic vein, measuring 14 cm in long axis. Round right mesocolic adenopathies, the largest of which measured 9 mm. In conclusion, there were several bi-lobar hepatic nodules whose enhancement kinetics were primarily suggestive of multifocal infiltrating HCC without secondary distant locations.



**Fig-3: Abdominal angioscan: multiple bi-lobar liver nodules**

Hepatic MRI showed an enlarged liver (FH21 cm), with regular contours, the site of multiple bi-lobular lesions, some of which were T1 hypersignal and T2 hypersignal, others T1 hypersignal and T2 hypersignal, the largest of which was located at the

level of segment VII-VIII, measuring 13\*17cm on the right and 2.7\*2 cm on the left. This aspect suggested secondary locations, some of which were T2 hypersignal, suggestive of a melanoma component, which is compatible with metastases of melanoma.



**Fig-4: Hepatic MRI : several bi-lobar liver nodules**

Biologically, the liver work-up showed cytotoxicity (ASAT 2.7\*LSN and ALAT 1.7\*LSN), moderate cholestasis (PAL 1.2\*LSN), without jaundice and without hepatocellular insufficiency (TP 83% and normal albumin). Serum protein electrophoresis was normal. Tumour markers were normal (AFP, CEA, CA19-9).

A liver biopsy on the tumour process and on non-tumourous liver showed a diffuse tumour proliferation made of medium to large cells with a large eosinophilic cytoplasm, the nuclei are irregular and hyperchromatic, most often nucleolated with a very removed mitotic index. Some isolated tumour cells with clear, more or less vacuolated cytoplasm with eccentric nuclei have a kitten-ring appearance. These elements are arranged in trabeculae, cords and diffuse sheets with the presence of a brownish pigment (melanin); evolving into a sparse stroma. An immuno-histochemical study showed that the tumour cells strongly express antibodies to Melan and HMB45. On the other hand, they are negative for antibodies against hepatocytes, CK7, CK2, AE1, AE3 and PSS100. Thus, the immunohistochemical profile of a poorly differentiated tumour process of melanocytic origin.

A CAT scan was performed as part of the extension work-up, which showed adenopathies in the right cardio phrenic angle, the largest of which measured 1 cm in minor axis. In the absence of suspicious lesions. Brain MRI showed no signal abnormalities or pathological contrast.

The patient was referred to the oncology centre for further treatment where he received chemotherapy with dacarbazine and immunotherapy with pembrolizumab, but the patient died, 4 years after the primary tumour was treated, 6 months after the appearance of the metastases and 3 months after the start of the chemotherapy and immunotherapy.

## DISCUSSION

The severity of choroidal melanoma is related to its metastatic potential. It spreads by the haematogenous route (absence of lymphatic drainage from the uvea). It essentially gives rise to liver metastases in 90% of cases. More rarely, lung, bone, lymph node, skin or brain metastases may develop, but these usually occur after the diagnosis of liver metastases [2]. Of 110 patients with ocular melanoma studied by Lorigan *et al*. [1], 101 (92%) had liver metastases and in 60 cases (55%) the liver was the only organ affected by metastases [1].

Liver metastases are rarely present at the time of initial diagnosis of choroidal melanoma [3]. Usually, the average time between curative treatment of the primary tumour and their appearance is three years [4]. In our case, the metastases occurred 4 years after enucleation, which is in line with the literature, and another case in the literature of liver metastases of a choroidal melanoma treated with proton therapy (60 grays) discovered 4 years later [5]. The peak of metastases occurred between the 3rd and 6th year [6, 7]. A study published in 2001 [8] showed that there was no significant difference in the occurrence of metastases between the two treatment modes. This suggests early metastatic spread independent of treatment. This suggests that metastatic spread occurs at a subclinical stage and that metastases may occur even though the uveal melanoma has been effectively treated [4]. Sometimes metastases occur later, at 11 and 18 years respectively [4]. Rare cases have been reported in the literature, sometimes up to 40 years after the discovery of the primary tumour [9]. Hence the importance of surveillance. It has been described in the literature that annual surveillance with liver ultrasound and liver biology would detect 59% of liver metastases before the patient becomes symptomatic. Six-monthly monitoring would detect 95% of these metastases [10]. In addition, increased LDH, LAP, gamma GT, AST and ALT levels were found in the 6 months prior to the diagnosis of

liver metastases [2]. Usually to diagnose liver damage as early as possible by insisting that the patient maintain a liver ultrasound check every six months for 10 years [11].

For therapeutic indications, surgery should be considered systematically for a patient with single or multiples locations in a single liver lobe and within the limits of anatomical accessibility [4]. It is the only potentially curative option [4]. Radiofrequency is an alternative for tumours that are ideally 4 cm in size and at a distance from the liver capsule (risk of perforation of hollow organs), large vessels (risk of loss of effectiveness due to cooling of the probe and risk of failure to destroy tumour cells in contact with the wall) and the biliary convergence (risk of biliary stenosis) [4]. Systemic chemotherapy or chemoembolisation is proposed when carcinological surgery is not feasible (number of lesions, locations, miliary) [4].

The average survival of patients with liver metastases in the absence of treatment is 4 months [5]. Various retrospective studies have shown that less than 10% of patients can benefit from carcinological surgery [12], resulting in a longer survival. In the study by R.J. Salmon *et al.* [13], patients who underwent carcinological surgery had a median survival of 22 months, compared with 9 months for patients whose resection was not complete. The quality of the resection is obviously the best guarantor of prognosis when technically possible, as a complete resection allowed a mean survival of 28 months; this survival is better than that obtained by intra-arterial chemotherapy with fotemustine estimated at 14 months [5].

## CONCLUSION

Choroidal melanoma is potentially metastatic with the liver being the primary site in 90% of cases. Early diagnosis of liver metastasis allows the initiation of local liver treatment, only complete surgical removal of the metastases seems to be of benefit to the patient. Currently available chemotherapies have not shown conclusive efficacy in the treatment of metastases. Hence the great importance of long-term monitoring of the patient after curative treatment of the primary tumour.

## REFERENCE

- Lorigan, J. G., Wallace, S., & Mavligit, G. M. (1991). The prevalence and location of metastases from ocular melanoma: imaging study in 110 patients. *AJR. American journal of roentgenology*, 157(6), 1279-1281.
- Bengrine-Lefevre, L., Desjardins, L., & Piperno-Neumann, S. Le mélanome de la choroïde: revue de la littérature Biology and therapeutic advances for uveal melanoma.
- Grossniklaus, H. E. (2013). Progression of ocular melanoma metastasis to the liver: the 2012 Zimmerman lecture. *JAMA ophthalmology*, 131(4), 462-469.
- Manshot, W. A., & van Strik, R. (1992). Uveal melanoma: therapeutic consequences of doubling times and irradiation results; a review. *International ophthalmology*, 16(2), 91-99.
- Mesri Khadidja Derdour Amine Benyamina Karim Nouasri Souad Idder Aicha A propos d'un mélanome uvéal métastatique sfo 2019
- Mallone, S., De Vries, E., Guzzo, M., Midena, E., Verne, J., Coebergh, J. W., ... & WG, T. R. (2012). Descriptive epidemiology of malignant mucosal and uveal melanomas and adnexal skin carcinomas in Europe. *European Journal of Cancer*, 48(8), 1167-1175.
- Zimmermann, L.E., McLean, Y.W., Foster, W.D. (1978). Does enucleation containing a malignant melanoma prevent or accelerate the dissemination of tumor cells? *Br J Ophthalmol*, 62 ; 420-5.
- Collaborative, O. M. S. G. (2001). Collaborative Ocular Melanoma Study (COMS) randomized trial of I-125 brachytherapy for medium choroidal melanoma. *Ophthalmology*, 108(2), 348-366.
- Meda, N., Cotta, C., Donnarieix, D., & Bacin, F. (2004). Métastases tardives après curiethérapie efficace de mélanome malin de la choroïde: À propos de deux cas. *Journal français d'ophtalmologie*, 27(5), 485-488.
- Coupland, S. E., Sidiki, S., Clark, B. J., McClaren, K., Kyle, P., & Lee, W. R. (1996). Metastatic choroidal melanoma to the contralateral orbit 40 years after enucleation. *Archives of Ophthalmology*, 114(6), 751-756.
- Dr Laurence Desjardins. Institut Curie Paris France. Encyclopédie de la vue. SNOF
- Feldman, E. D., Pingpank, J. F., & Alexander, H. R. (2004). Regional treatment options for patients with ocular melanoma metastatic to the liver. *Annals of surgical oncology*, 11(3), 290-297.
- Salmon, R. J., Levy, C., Plancher, C., Dorval, T., Desjardins, L., Leyvrazi, S., ... & Asselain, B. (1998). Treatment of liver metastases from uveal melanoma by combined surgery—chemotherapy. *European Journal of Surgical Oncology (EJSO)*, 24(2), 127-130.