Scholars Journal of Medical Case Reports
Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

Surgery

Metastatic Melanoma of Unknown Primary

Dehhaze Adil[1], Daghouri Nada-Imane[2*], Labbaci Rim[2], Taybi Otmane[2], Diher Issam[2], Tazi Hanae[2], Echmili Mouad[2], Mai Aisha[2], Barij Hamza[2], Bouazza Omar[2], Mahioui Mimoun[2]

[1]Assistant Professor and Head of the Department of Plastic, Reconstructive and Aesthetic Surgery, Center for Burned Patients, CHU Tangier-Tetouan-Al Hoceima, Morocco
[2]Resident, Department of Plastic, Reconstructive and Aesthetic Surgery, Center for Burned Patients, CHU Tangier-Tetouan-Al Hoceima, Morocco

DOI: 10.36347/sjmcr.2023.v11i11.028 | **Received:** 17.10.2023 | **Accepted:** 22.11.2023 | **Published:** 24.11.2023

***Corresponding author:** Daghouri Nada-Imane
Resident, Department of Plastic, Reconstructive and Aesthetic Surgery, Center for Burned Patients, CHU Tangier-Tetouan-Al Hoceima, Morocco

Abstract **Case Report**

Metastatic melanoma without a primary is a rare form of skin cancer. Unlike typical melanomas, where the primary tumor is present, metastatic melanoma without a primary is characterized by the presence of metastases without the presence of an identifiable primary tumor. Treatment options depend on the location and extent of metastasis, and advances have been made in the development of targeted therapies. It is important that individuals with risk factors for this disease undergo regular testing for early signs of the disease and that healthcare professionals are aware of this rare disease when diagnosing metastases without a primary. However, the prognosis remains poor due to the difficulty in diagnosing the disease at an early stage. In this article, we will discuss the causes, symptoms, diagnostic methods, and treatment options for this disease.

Keywords: Metastatic melanoma, skin cancer, diagnostic methods.

Copyright © 2023 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution **4.0 International License (CC BY-NC 4.0)** which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

INTRODUCTION

Melanoma is a tumor proliferation developed at the expense of melanocytes whose main function is the synthesis of melanin. It represents less than 10% of skin cancers in Morocco but is by far the most deadly malignant skin tumor [1, 2].

Melanoma incidence is increasing in Caucasian countries with a simultaneous increase in mortality. In Hispanic and African-American populations, the incidence is lower but these ethnic groups have a greater risk of developing melanomas with a higher metastatic potential and a poorer prognosis [2].

Surgical excision remains the main modality for the treatment of melanomas, they are very curable in the localized stages and their treatment is surgical excision with margins proportional to the micro stage of the primary lesion [3].

Metastatic melanoma without primary is a rare form of skin cancer in which metastases develop without a primary tumor being detected [4].

In this paper, we report the case of a 46-year-old patient referred for temporal metastasis of an unknown melanoma, whose treatment was based on tumor resection with pathology review.

OBSERVATION

A 46-year-old female patient with no medical history was referred from the radiotherapy department for the recurrence of a temporal metastasis of an unknown melanoma.

The initial lesion showed four months ago: swelling of the temporal region of rapid evolution without other associated signs. The patient underwent surgery with removal of the lesion and the immunohistochemistry revealed a temporal metastasis of melanoma. The mucocutaneous examination did not reveal any suspicious lesion and the evolution was marked by a local recurrence. The patient was transferred to radiotherapy and then referred to our department for a second excision.

On local skin examination: the patient was phototype III with a firm painless mass measuring 35

mm on a long axis located in the left temporal and zygomatic region without inflammatory signs.

The mucocutaneous examination did not reveal any suspicious lesions on the entire skin surface.

Figure 1: Significant tumefaction of the left temporal and zygomatic regions

The locoregional examination was normal without lymphatique adenopathy.

The cervicofacial MRI showed a suspicious-looking subcutaneous fatty tissue mass of the left temporal region measuring 38mm in the major axis and the extension workup showed no distant dissemination.

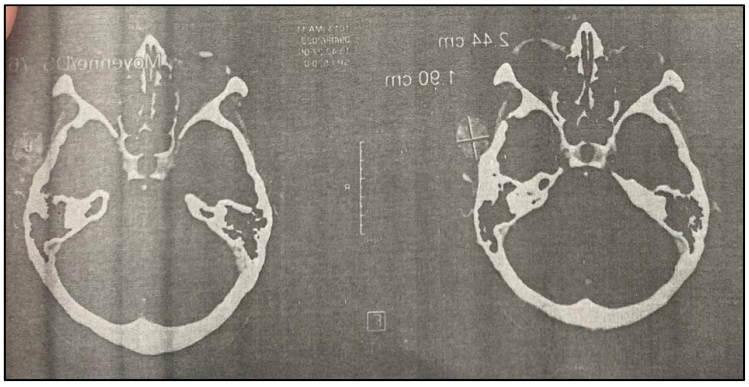

Figure 2: Axial section of cervico-facial MRI

A decision of excision with concomitant extemporaneous examination was made.

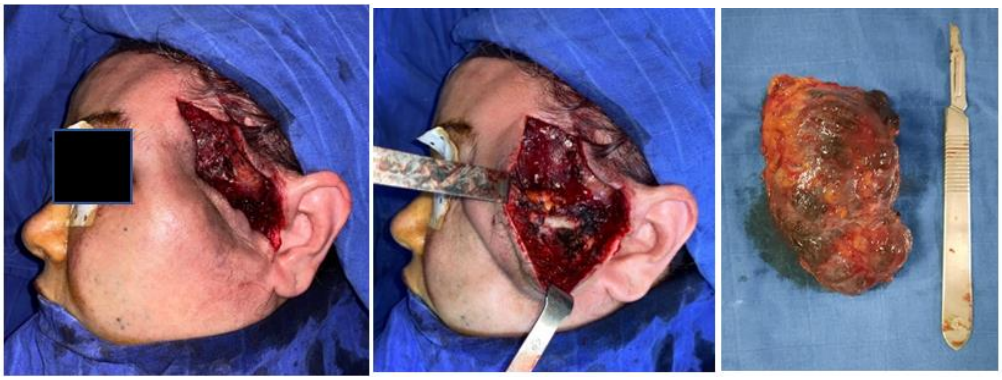

Figure 3: Intraoperative images: complete tumor excision

The anatomopathological study revealed a complete excision of a temporal metastasis of melanoma, the decision was to close by suture with a suction drain and to refer the patient to radiotherapy for further management.

Figure 4: Intraoperative images: Incision closure with suction drain

DISCUSSION

Melanoma corresponds to a malignant proliferation of melanocytes [5]. Large differences in incidence are observed according to sun exposure and ethnic characteristics of the populations. The incidence doubles approximately every 10 years and continues to increase by 5%/year in countries with white populations but remains stable in those with black populations [6, 7].

Malignant melanoma is the ninth most common cancer in Europe, with over 100,000 new cases diagnosed in 2012 (3% of the total). While in the UK, malignant melanoma is the 5th most common cancer [8-10].

In Africa, despite intense sunshine, these countries have low incidence rates, this is most likely due to the dark phototype of their populations [11]. In Morocco, melanoma ranks third after primary carcinomas and sarcomas [1]. Although our country shares the same risk factors and habits as the other Maghreb countries and has a low incidence rate, official statistics are rare. According to a study published in 2007, carried out at the Ibn Rochd University Hospital in Casablanca, cutaneous melanoma represents 3.5% of skin cancers diagnosed over a period extending from 1984 to 2007 [12, 13]. In Fez, this frequency is estimated at 4.3% of all skin cancers according to the skin cancer registry of the anatomopathology department of Hassan II University Hospital [1].

Melanoma of unknown origin (MPI) is defined as a melanoma diagnosed in a secondary lesion without a primary lesion found and is considered to be a metastatic melanoma from the start. [4]

Metastatic melanoma without a primary is a rare form of skin cancer that develops when melanoma cancer cells spread to other parts of the body without a primary lesion visible on the skin. This condition is also known as unknown melanoma or occult metastatic melanoma. [4]

The exact causes of metastatic melanoma without a primary are not yet clearly defined [4]. However, it is known that certain risk factors can increase the chances of developing this form of cancer. People with a history of melanoma or skin cancer [14-17], people with very fair skin [18, 19], people with excessive sun exposure [20-22], and people with weakened immune systems are more likely to develop this disease [23-25].

Symptoms of metastatic melanoma without a primary can be difficult to detect because there is no visible primary tumor. Metastases can develop in various organs of the body, such as the lungs, liver, bones, and brain, causing different symptoms depending on the location of the metastases [26, 27].

The diagnosis of metastatic melanoma without a primary can be difficult because there is no visible primary tumor. Diagnosis is usually based on imaging studies, such as X-rays, computed tomography (CT) scans, and magnetic resonance imaging (MRI), to detect metastasis to organs in the body [4]. The management of MPI patients remains heterogeneous and the survival rate of these patients remains inconsistent compared to melanoma patients of known primary (MPC) [28].

Treatment of metastatic melanoma without a primary depends on the location and extent of metastasis. Common treatment options include surgery, radiation therapy, and chemotherapy [4, 28, 29].

Surgery can be used to remove metastases in organs of the body. If the metastasis is small and well-localized, surgery may offer a chance of cure. However, if the metastasis is larger or has spread to multiple organs, surgery may not be possible [4, 29, 30].

Radiation therapy uses radiation to destroy cancer cells. It may be used to treat metastases that cannot be surgically removed or to shrink the tumor before surgery [31].

Recent studies have also shown that the use of targeted therapies to target genetic mutations that may contribute to the development of melanoma can be effective in treating this disease [31, 32].

The prognosis for patients with this disease is generally less favorable than for patients with melanoma with a known primary but advances in treatment offer hope for improved outcomes in the future [28, 29].

Unfortunately, because of the difficulty in diagnosing metastatic melanoma without primary, many cases are diagnosed at an advanced stage, making treatment more difficult and the outlook for survival bleaker. Therefore, people with risk factors for this disease must undergo regular skin and medical examinations to detect any early signs of the disease [33].

Prevention of metastatic melanoma without a primary involves avoiding excessive sun exposure, wearing protective clothing, and regularly monitoring the skin for any suspicious changes or lesions [33, 34].

CONCLUSION

Metastatic melanoma without a primary is a rare but serious form of skin cancer that can be difficult to diagnose and treat. It is important to take preventive measures to reduce the risk of developing this disease.

Advanced imaging techniques are needed to identify metastases. Treatment depends on many individual factors and may include surgery, radiation therapy, chemotherapy, and targeted therapies.

REFERENCES

1. Registre de cancer de CHU de Fès.
2. Kirkwood, J. M., Ibrahim, J. G., Sondak, V. K., Richards, J., Flaherty, L. E., Ernstoff, M. S., ... & Blum, R. H. (2000). High-and low-dose interferon alfa-2b in high-risk melanoma: first analysis of intergroup trial E1690/S9111/C9190. *Journal of clinical oncology*, *18*(12), 2444-2458.
3. National Comprehensive Cancer Network. NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines): Melanoma, version 1. 2013.
4. Varey, E., Dalle, S., Nguyen, J. M., Dupuy, A., Lacour, J. P., Guillot, B., ... & Le Réseau, R. M. (2017, December). Patients atteints de mélanome sans primitif retrouvé de la base nationale RIC-Mel. In *Annales de Dermatologie et de Vénéréologie* (Vol. 144, No. 12, p. S306). Elsevier Masson.
5. Lipsker, D., & Cribier, B. (2003). Tumeurs cutanées épithéliales et mélaniques. *Ann Dermatol Venereol*, 30, 140-145.
6. Passeron, T. (2011). Lésions pigmentées. Elsevier Masson SAS, 2-0670.
7. Florian, R., & Emilie, L. (2013). Epidémiologie et facteurs de risque du mélanome. Revue de la MTRL- Ensemble contre le mélanome.
8. The Office for National Statistics on request UK, July 2013, disponible sur: (http://www.ons.gov.uk/ons/search/index.html?newquery=cancer+registrations)
9. Ferlay, J., Soerjomataram, I., Ervik, M., Dikshit, R., Eser, S., Mathers, C., ... & Bray, F. (2013). GLOBOCAN 2012 v1. 0, cancer incidence and mortality worldwide. *Iarc Cancerbase*, *11*.
10. Ferlay, J., Steliarova-Foucher, E., Lortet-Tieulent, J., Rosso, S., Coebergh, J. W. W., Comber, H., ... & Bray, F. (2013). Cancer incidence and mortality patterns in Europe: estimates for 40 countries in 2012. *European journal of cancer*, *49*(6), 1374-1403.
11. Balch, C. M., Soong, S. J., Atkins, M. B., Buzaid, A. C., Cascinelli, N., Coit, D. G., ... & Thompson, J. F. (2004). An Evidence-based Staging System for Cutaneous Melanoma 1. *CA: a cancer journal for clinicians*, *54*(3), 131-149.
12. Bennouna Biaz, F., & Ait-Ourhrouil, M. (1998). habib-Dine, Lakhdar H, El Guedari B, Souadka A et al. *Le mélanome au Maroc. Nouv Dermatol*, *1*(7), 56-59.
13. Romli, A. (2007). Le mélanome: etude à propos de dix cas et revue de la literature [Thèse]. Rabat: Université Mohammed V, 2005 A Case Series and Review of the Literature. *Dermatol Surg*, *33*, 1-10.
14. Goggins, W. B., & Tsao, H. (2003). A population-based analysis of risk factors for a second primary cutaneous melanoma among melanoma survivors. *Cancer: Interdisciplinary International Journal of the American Cancer Society*, *97*(3), 639-643.
15. Begg, C. B., Orlow, I., Hummer, A. J., Armstrong, B. K., Kricker, A., Marrett, L. D., ... & Berwick, M. (2005). Lifetime risk of melanoma in CDKN2A mutation carriers in a population-based sample. *Journal of the National Cancer Institute*, *97*(20), 1507-1515.
16. van der Leest, R. J. T., Liu, L., Coebergh, J. W. W., Neumann, H. A. M., Mooi, W. J., Nijsten, T., & de Vries, E. (2012). Risk of second primary in situ and invasive melanoma in a Dutch population-based cohort: 1989–2008. *British Journal of Dermatology*, *167*(6), 1321-1330.
17. Marghoob, A. A., Slade, J., Salopek, T. G., Kopf, A. W., Bart, R. S., & Rigel, D. S. (1995). Basal cell and squamous cell carcinomas are important risk factors for cutaneous malignant melanoma. Screening implications. *Cancer*, *75*(S2), 707-714.
18. Scherer, D., & Kumar, R. (2010). Genetics of pigmentation in skin cancer—a review. *Mutation*

Research/Reviews in Mutation Research, *705*(2), 141-153.
19. Olsen, C. M., Carroll, H. J., & Whiteman, D. C. (2010). Estimating the attributable fraction for melanoma: a meta-analysis of pigmentary characteristics and freckling. *International journal of cancer*, *127*(10), 2430-2445.
20. Nelemans, P. J., Rampen, F. H. J., Ruiter, D. J., & Verbeek, A. L. M. (1995). An addition to the controversy on sunlight exposure and melanoma risk: a meta-analytical approach. *Journal of clinical epidemiology*, *48*(11), 1331-1342.
21. Elwood, J. M., & Jopson, J. (1997). Melanoma and sun exposure: an overview of published studies. *International journal of cancer*, *73*(2), 198-203.
22. Boniol, M., Autier, P., Boyle, P., & Gandini, S. (2012). Cutaneous melanoma attributable to sunbed use: systematic review and meta-analysis. *Bmj*, *345*-e4757 doi: 10.1136/bmj.e4757.
23. Singh, S., Nagpal, S. J. S., Murad, M. H., Yadav, S., Kane, S. V., Pardi, D. S., ... & Loftus Jr, E. V. (2014). Inflammatory bowel disease is associated with an increased risk of melanoma: a systematic review and meta-analysis. *Clinical Gastroenterology and Hepatology*, *12*(2), 210-218. doi 10.1016/ j.cgh.2013.04.033
24. Dinh, Q. Q., & Chong, A. H. (2007). Melanoma in organ transplant recipients: the old enemy finds a new battleground. *Australasian journal of dermatology*, *48*(4), 199-207.
25. Olsen, C. M., Knight, L. L., & Green, A. C. (2014). Risk of melanoma in people with HIV/AIDS in the pre-and post-HAART eras: a systematic review and meta-analysis of cohort studies. *PLoS One*, *9*(4), e95096.
26. Guillot, B., & Du-Thanh, A. (2012). Tumeurs malignes cutanées épithéliales et mélaniques. *La Revue du Praticien*, *62*(2), 247-254.
27. Balch, C. M., Soong, S. J., Gershenwald, J. E., Thompson, J. F., Reintgen, D. S., Cascinelli, N., ... & Morabito, A. (2001). Prognostic factors analysis of 17,600 melanoma patients: validation of the American Joint Committee on Cancer melanoma staging system. *Journal of clinical oncology*, *19*(16), 3622-3634.
28. Bae, J. M., Choi, Y. Y., Kim, D. S., Lee, J. H., Jang, H. S., Lee, J. H., ... & Chung, K. Y. (2015). Metastatic melanomas of unknown primary show better prognosis than those of known primary: a systematic review and meta-analysis of observational studies. *Journal of the American Academy of Dermatology*, *72*(1), 59-70.
29. Mélanome métastatique sans primitif retrouvé: un meilleur pronostic? Dr Patrice Plantin JIM Actualités médicales 25 févr. 2015.
30. National Comprehensive Cancer Network. NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines): Melanoma, version 1.2013.
31. National cancer institute. Melanoma Treatment (PDQ®) November 7, 2014 Disponible sur(http://www.cancer.gov/cancertopics/pdq/treatment/melanoma/HealthProfessional/page4)
32. Chapman, P. B., Hauschild, A., Robert, C., Haanen, J. B., Ascierto, P., Larkin, J., ... & McArthur, G. A. (2011). Improved survival with vemurafenib in melanoma with BRAF V600E mutation. *New England Journal of Medicine*, *364*(26), 2507-2516.
33. Hugo, C. (2013). Mélanome: prévention et dépistage; Revue de la MTRL- Ensemble contre le mélanome 2013.
34. Bailly, C., Fervers, B., & Negrier, S. (1998). Mélanome cutané». Standars, Options et recommandations (SOR). Copyright FNCLCC (Féderation nationale des centres de lutte contre le cancer), 39-42.