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Recurrent malignant melanoma of the left foot with metastasis: A case report

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Abstract
The initial diagnosis of metastatic melanoma is relatively uncommon, and the 5-year survival rate is less than 15%. We present a case of late melanoma recurrence that manifested as an in-transit metastasis in the iliac bone, occurring two years after the excision of the tumour. In the present case report; A 59 year female was reported to the outpatient department of the medical college & associated hospital. The patients past medical history stated that she is known case of foot melanoma diagnosis and was operated in 2019. In July 2020, the patient developed recurrence in July 2020. A wide local surgical excision to achieve a 2-centimeter margin with skin graft was undertaken with an associated sentinel lymph node biopsy. Upon follow-up, it was discovered that the patient had been disease-free for a full year. However, the lesion started to reoccur in the period of July 2022. A PET-CT of her whole blood was performed. The patient received IV fluids, antibiotics, analgesics, and other supportive care before being released once the hemodynamics were determined to be stable. A 10-year period of disease-free living cannot usually be regarded as a definitive cure for melanoma. Always let your doctor know if you've previously been diagnosed with melanoma.

Keywords: Metastatic melanoma, recurrence, sentinel lymph node, supportive treatment

Introduction
Melanocytes are the skin's normal pigment-producing cells, and melanoma is caused by their malignant proliferative behaviour. One of the most prevalent forms of neoplasia in young individuals, cutaneous melanoma has a significant mortality rate in this group. Melanoma is a public health concern because of its rising incidence, frequency of diagnosis in those under 59, associated medical expenditures, and mortality [1, 2].

White people are more likely than Black, Asian, or Hispanic people to get cutaneous melanoma, which increases their risk of the disease by about ten times. However, there is no difference in the prevalence of plantar malignant melanoma between White and Black people. Malignant melanoma is hardly frequent in India, with a frequency of less than 0.5% [3, 4].

The initial diagnosis of metastatic melanoma is relatively uncommon, and the 5-year survival rate is less than 15%. Any epidermal or subcutaneous metastases that are greater than 2 cm from the initial lesion but do not extend past the regional nodal basin are referred to as in-transit metastases [5-8]. We present a case of late melanoma recurrence that manifested as an in-transit metastasis in the iliac bone, occurring two years after the excision of the tumour.

Case Presentation
In the present case report; A 59 year female was reported to the outpatient department of the medical college & associated hospital. The proper medical history of the patient was recorded. The medical history stated that patient is non diabetic but hypertensive since last 8 to 10 years and is under medication. The patients past medical history stated that she is known case of foot melanoma diagnosis and was operated in 2019. After that she was kept on follow up period or regular check up.

In July 2020, the patient developed recurrence in July 2020. A multi-disciplinary team approach discussed the options with the patient. These included recommending severe therapeutic approaches to the patient, such as broad local excision with a potential skin transplant, sentinel lymph node biopsy, and the necessity for chemotherapy. Given the seriousness of malignant melanoma, it was also addressed whether to stop additional excisions and instead concentrate on palliative therapy approaches.

In addition to a sentinel lymph node biopsy, a wide local surgical excision was performed to obtain a 2-centimeter margin. The biopsy of the sentinel lymph node revealed metastatic illness. His wound infection and slow wound healing hampered his post-operative course, necessitating additional skin grafting on the advice of plastic surgery.

The patient received about 2 cycles of immunotherapy for the period of one year. Clinical follow-up was performed every three to six months with Dermatology, Oncology, and General Surgery in a multi-disciplinary fashion. This assessed for local recurrence as well as emergence of new lesions. Follow-up imaging included sequential PET scans which were obtained every four months. The patient was found to be diseases free for the period of 1 year on follow up.

However in the during the period of July 2022 the lesion developed recurrence. Again the biopsy of the lesion was done, the lesion showed round epitheloid tumor cells with atypical nuclei containing prominent nucleoli suggestive of histopathological diagnosis of malignancy of soft tissues (fig 1). Her whole blood PET-CT was done. The reports showed metabolically active subcutaneous, cutaneous residual malignant lesions in lateral aspect of left foot, active large solid cystic lesion in right ovarian mass suspicious lesion. Her MRI of the left foot contrast showed past surgical clips with non visualization of left 5th metatarsal. The USG guided biopsy showed poorly differentiated malignant round cell tumor. IHC analysis showed the confirmatory positive expression of S100 (fig 2), Melan A (fig 3), HMB 45 (fig 4) and had negative expression for CD45. The features were consistent with metastatic melanoma. The patient was admitted for supportive care. The patient was treated with IV fluids, antibiotics, analgesics, and other supportive treatment and once the hemodynamic was found to be stable the patient was discharged.

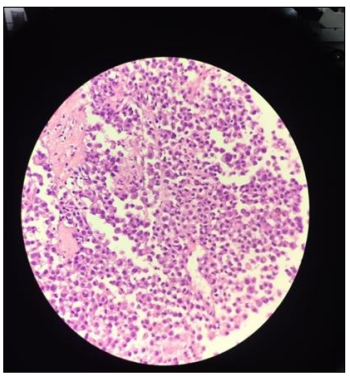

Fig 1: Round epitheloid tumor cells with atypical nuclei containing prominent nucleoli. [Hematoxylin & eosin stain - 40 x]

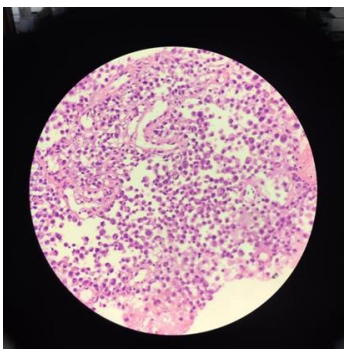

Fig 2: Round epitheloid tumor cells with atypical nuclei containing prominent nucleoli. [Hematoxylin & eosin stain - 40 x]

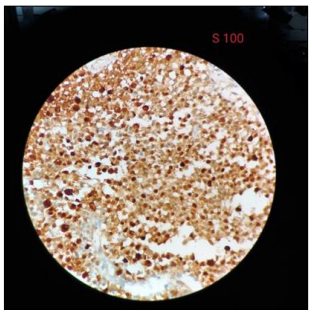

Fig 3: Tumor cell express strong nuclear expression for S-100 [S-100 - 40 x]

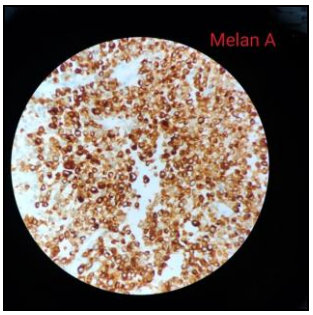

Fig 4: Tumor cell express strong cytoplasmic expression for Melan-A. [Melan-A - 40 x]

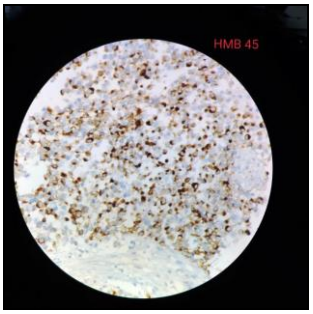

Fig 5: Tumor cell express cytoplasmic expression for HMB - 45. [HMB-45 - 40 x]

Discussion

In East Asia, melanoma is most typically found on the foot. Acral melanomas on the feet have a lower survival rate. This reason for the poor prognosis is almost certainly multifactorial. Patients' failure to recognize their condition and clinicians' misdiagnosis of benign disease can contribute to poor survival. The accuracy with which malignant melanoma is detected and managed during the initial and subsequent visits may directly impact the prognosis of patients. Early melanomas associated with pre-existing melanocytic nevi are frequently difficult to detect, recommending dermatoscopy and pathological biopsy [9, 10].

In the first three years following excision, metastatic recurrence occurs in roughly 65-81% of patients, indicating that death is solely correlated with the disease stage. Although tumour thickness is a prognostic indication, the duration of the disease-free interval cannot be predicted with 100% certainty. Greater survival predictors than distant metastases are local lymphadenopathy and local skin metastasis [10].

Early metastasis, which is defined as occurring within three years of the initial diagnosis, is linked to lesions with ulceration, increased thickness, and patients who have had nonmelanoma skin cancer (NMSC).

Melanoma tumour features, tumour cell intrinsic factors,

tumour macroenvironment, and tumour microenvironment are linked to the likelihood and pattern of metastasis. These can both prevent and promote the growth of tumour cells with a variety of potent effects. The majority of national standards advise a 10-year follow-up since metastasis is most typically observed in the first years after the excision and after this lengthy period of disease-free time, patients are frequently deemed "cured." However, the clinical course of melanoma can be unpredictable, and reports of late recurrence, which is defined as metastatic after 10 years from initial therapy, have also been made [11, 12]. Although this is an unusual occurrence, it is a worrying sign of the illness. Every 1000 patients assessed over a 10-year period could have 229 recurrences and 61 new original melanomas, according to the AIOM. Although late metastasis has been documented, the majority of melanomas spread within 5 years of the removal of the initial tumor.

Despite the lack of evidence that follow-ups can improve a patient's prognosis after treatment, AIOM recommends a 10-year follow-up for all melanoma patients, including outpatient clinic visits and radiological staging exams. A lifetime increase in the risk of new primary and recurrence should also be known to the doctor. The nevi should be dermatologically mapped every year for the rest of one's life. The participating team should also advise patients to get in touch with their general practitioner after the oncology outpatient follow-ups are over.

Conclusion

A 10-year period of disease-free living cannot usually be regarded as a definitive cure for melanoma. Always let your doctor know if you've previously been diagnosed with melanoma. Which lesions are more likely to experience a late recurrence and spread to other organs will be determined by a better understanding of the disease's features and the idea of tumour dormancy. The major methods used by doctors to find new metastatic disease are follow-ups and patient knowledge of the risk of recurrence. These methods are crucial since an early identification can allow for the beginning of an intensive chemosurgical therapy.

Conflict of Interest

Not available

Financial Support

Not available

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