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AMELANOTIC MELANOMA- RARE CASE REPORT

Huma Parveen, Saba Naziya, Shivangi Shukla, Reeta Chaudhary, Priyanka Verma, Nirupma Lal

Department of Pathology

Era's Lucknow Medical College & Hospital, Era University, Sarfarazganj, Lucknow, U.P., India-226003.

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Address for correspondence

Dr. Huma Parveen
Department of Pathology
Era's Lucknow Medical College & Hospital, Era University, Lucknow-226003.
Email: parveenhuma29@gmail.com
Contact no: +91-6394708266

ABSTRACT

Amelanotic melanoma is an uncommon type of of melanoma which lacks melanin pigment (1). Of all the melanoma cases, approximately 2-8% cases represents amelanotic melanoma. The exact prevalence of this malignancy is more due to misdiagnosis. Due to lack of clinical criteria and pigmentation, the condition often detected late (2). Amelanotic melanomas are commonly found on the face, which shows microscopically the characteristics of desmoplasia (desmoplastic melanoma), but other body parts can also be involved (4).

KEYWORDS: Amelanotic melanoma, Melanin pigment, Immunohistochemistry.

INTRODUCTION

Amelanotic melanoma is an uncommon type of melanoma which lacks melanin pigment (1). However melanoma is a tumour that have varying amount of melanin pigment, in rare cases the melanin pigment may be absent in the entire tumor (therefore called as amelanotic melanoma). Amelanotic melanoma of the nail bed accounts for 20 to 30% as compared to other dermal lesions of the melanoma. The usual presentation of the nail bed lesion is as chronic paronychia, which is an inert granulomatous ulceration, a wart like keratotic tumor or a pyogenic granuloma-like lesion. Amelanotic melanomas are commonly found on the face, which shows microscopically the characteristics of desmoplasia (desmoplastic melanoma), but other body parts can also be involved (4). Nodular variety is the most common presentation of amelanotic melanoma[2]. Clinical misdiagnosis is particularly common in amelanotic melanoma (3). Melanocytic cutaneous neoplasm comprises a vast variety of benign and malignant neoplasms which are defined on the basis of clinical, morphological and genetic profiles. Malignant melanomas are the most important group of skin cancers in view of clinical and public health . These malignant melanomas have higher tendency of lymphatic and haematogenic metastasis, frequently metastasise to distant parts of the body (4). The most important environmental risk factor for malignant melanoma is intermittent high exposure to ultraviolet radiation. Genetic susceptibility as an endogenous factor often a major role in malignant melanoma in combination with ultraviolet radiation (1).

CASE REPORT

A 56 year old male patient, presented in the OPD with a complaint of non healing chronic heel ulcer. Patient gave history that after pierced by a flower prickle 10 months a ago into the left heel, there was ulceration in the left heel along with scant purulent discharge. The wound was diagnosed as a infectious ulcer and antibiotics were prescribed. Despite of antibiotic treatment the ulcer is persistent and increased in size with presence of pus like discharge. The condition was diagnosed as chronic osteomyelitis and various sets of antibiotics were given to the patient but there was no improvement in the condition of the patient. He had no personal, pas and family history of skin malignancies or melanoma.

Patients routine hemogram was carried out which revealed haemoglobin 12.2 gm/dl, total leucocyte count = 8600 cells/cumm and platelets = 180000/μL. c-reactive protein(CRP) = 2.4 mg/dl and erythrocyte sedimentation rate(ESR) was 14mm/h. His blood biochemistry reports were within normal limits (Creatinine = 1.2 mg/dl, SGOT(aspartate aminotransferase) - 14U/L , SGPT (alanine aminotransferase) – 23 U/L, blood urea nitrogen(BUN) – 12 mg/dl).

Blood sugar level (fasting and post prandial) were within normal limits. The serological test for viral markers like human immunodeficiency virus, hepatitis b surface antigen and hepatitis C was negative. Patient chest roentogenogram and electrocardiogram were normal.

On physical examination patient was well oriented and had no fever. His vitals were here stable. Patient had no

history of significant weight loss or history of breathlessness, bone tenderness and bleeding.

Biopsy was taken from chronic ulcer for the histopathological examination. The histopathological report gave impression of amelanotic melanoma with marked hypergranulosis and hyperkeratosis. The atypical cells (tumor cells) exhibit high nuclear cytoplasmic ratio, pleomorphism, hyperchromasia round to ovoid nuclei with prominent nucleoli and scant eosinophilic cytoplasm. Along the dermoepidermal junction, atypical melanocytes and melanocytic nests also seen and shows lentiginous proloferation. Also seen are upward spreading of atypical melanocytes. Breslow level of 3mm thickness was also noted. Perineural and vascular invasion was absent.

On immunohistochemistry, the atypical tumor cells showed positivity for Melan-A, HMB-45 and S-100 . Expression of S-100 in case of malignant melanoma is diffuse. Tumor also show positivity for MART-1. Sometime S-100 protein negative variants of melanoma may also be encountered, so it is always useful to use at least two immunohistochemistry markers for melanoma.

For surgical intervention, patient was referred to oncosurgery department where local excision of the ulcer was done.

DISCUSSION

Amelanotic melanoma comprises of 2% - 3% of all the melanoma cases and may advances into various non typical forms, due to which they are not easily discernible as malignant melanoma. Amelanotic variant of melanoma, often does not display definitive features which includes of (Asymmetry, Border, Colour, Diameter, and Evolution) abbreviated as "ABCD" [1]. It is stated that non malignant cutaneous lesions of the foot are very frequent, therefore to lessen the incidence of misdiagnosis or underdiagnosis of malignant melanoma among the various non malignant cases, Bristow et al have given the "CUBED" as another criteria to recognise the lesions of the foot concerned.[1]CUBED referred as C- coloured lesions of the skin, U- Undertermined diagnosis of the lesion, B-Cleeding ulcers in the foot or under the nail, E- Enlargement or deterioration of ulcers irrespective of treatment and D-Delay in the healing of any ulcer and skin lesion > 2 months. This uncommon variant of malignant melanoma develops in various other parts of the body with atypical morphological features, therefore it is very difficult to make diagnosis or often it is misdiagnosed[3]. Generally, at the early stages of the disease, complications related to amelanotic melanoma may be misdiagnosed as cutaneous ulcers in the skin tissue that results from other diseases

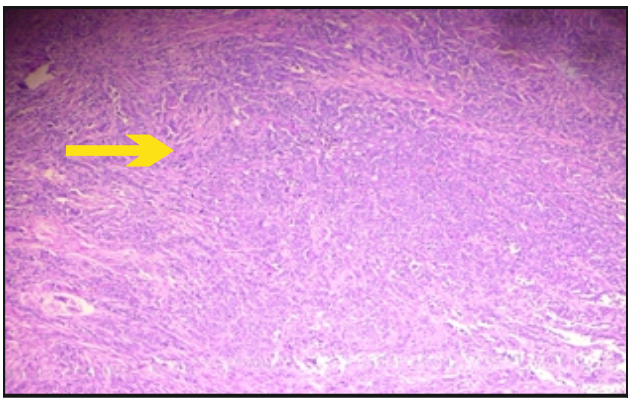

Fig. 1: 4x view of Amelanotic Melanoma

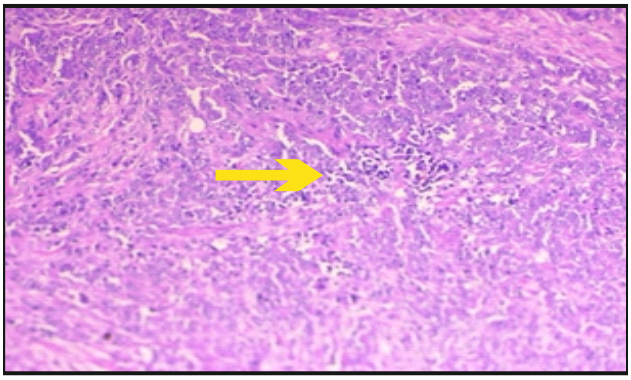

Fig. 2: 10x view of Amelanotic Melanoma

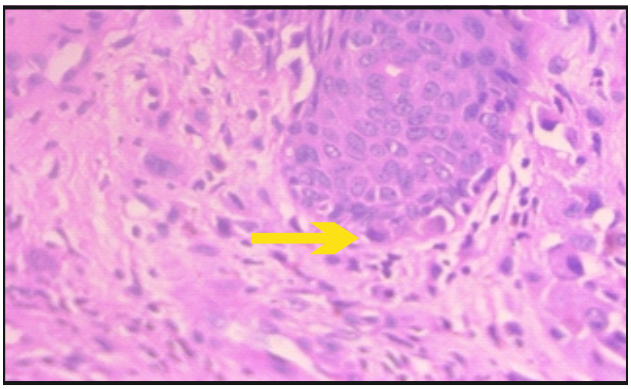

Fig. 3: 40x Magnification- Amelanotic Melanoma

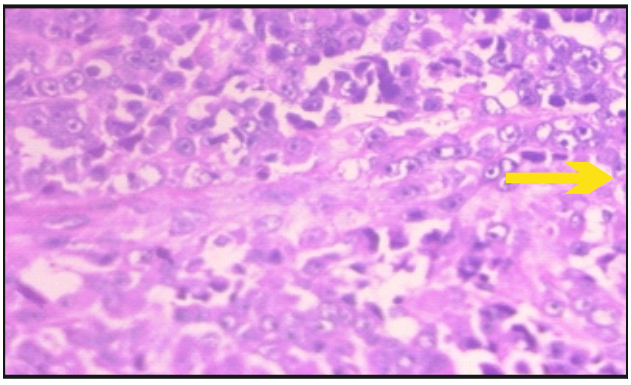

Fig. 4: 40x – Mitosis in Amelanotic Melanoma

example diabetic foot ulcers (1). Thus, because of misdiagnosis, in lack of proper treatment which is ineffective and unrelated, results in poor prognosis of the disease (2). Several studies show that due to delayed diagnosis, survival rate after amelanotic melanoma is worst than that in melanotic melanoma, it may be due to amelanotic melanoma is often misdiagnose or underdiagnose, and its leads to the poorer disease prognosis than the pigmented melanoma types (4). Any type of non-pigmented melanoma, clinically, referred as amelanotic melanoma, but in almost all of cases, low level of melanin pigment present in the tumor (hypomelanotic melanoma), which is misdiagnosed as other cutaneous diseases such as non malignant and malignant skin ulcers or tumors or even skin related inflammatory conditions (1). Thus because of this, treatment is often stated late until the disease reached in its advanced stage and therefore these lesions are converted into other type of melanoma like vascular or nodular variety etc1. Unable to conduct the histopathological examination at an early stage, the prognosis of this is poor. However in various cases, lower limb ulcers further remain unnoticed by doctor as well by the patient. Thus to make an early and accurate diagnosis, the histopathological examination of the lesion should be done by taking biopsy from representative area properly. In my case, diagnosis of amelanotic melanoma has been made and proper therapies were given to the patient to improve his condition (4).

CONCLUSIONS

in many of the cases, amelanotic melanoma often misdiagnosed, specially when the lesions lacks melanin pigment, no melanin or amelanotic or appear in the nail region. Prognosis of amelanotic melanoma can be improved by early and accurate diagnosis and thus it increases the patient survival[4]. Therefore, doctors should maintain a high level of conjecture in identifying malignant amelanotic melanoma from other non malignant skin lesions of the foot to decrease the rate of misdiagnosis of the amelanotic melanoma and thus amelanotic melanoma. Accurate, proper and early assertive treatment after the early diagnosis of amelanotic melanoma can increase the patient survival rate by 5 years.

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Orcid ID:
Huma Parveen - http://orchiod.org/0000-0001-5903-0130
Saba Naziya - http://orchiod.org/0000-0003-0588-6034
Shivangi Shukla - https://orcid.org/0000-0002-4707-4475
Reeta Chaudhary - https://orcid.org/0000-0003-4861-8806
Priyanka Verma - https://orcid.org/0000-0003-2238-2962
Nirupma Lal - https://orcid.org/0000-0001-9615-5426

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