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AMELANOTIC MELANOMA OVER HEEL: THE RAREST PRESENTATION OF RARE MELANOMA

Plastic Surgery

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ABSTRACT

Introduction : Amelanotic melanoma is a rare type of nodular melanoma with an incidence of less than 2 % of all melanomas. Melanoma commonly occurs over areas of sun exposure due to ultraviolet rays' radiation and can rarely involve non sun exposed areas like in our case (heel). Amelanotic melanoma lacks pigmentation making diagnosis challenging as it resembles other non-melanocytic lesions over heel. There is dearth of literature about amelanotic melanoma over heel with indexed articles review. The purpose of this article is to report a case of amelanotic melanoma over heel with emphasis of immunohistochemistry in every non melanotic lesion of heel. **Case Summary:** A 63-year diabetic male patient presented with complaints of recurrent growth over lateral aspect of heel on left side for last 2 years with history of a trivial trauma at same site 2 years back which didn't heal and increased in size over a period. On examination a 5x4 cm fungating growth was present over lateral aspect of left heel, firm in consistency with irregular margins and bossellated surface with eroded skin margins with no inguinal lymphadenopathy. CECT of chest reported normal. Wedge Biopsy reported presence of high-grade malignant neoplasm. Wide local excision of lesion was done, and defect was reconstructed with reverse sural flap and excisional biopsy report revealed high grade malignant neoplasm with possibility of melanoma or alveolar soft part sarcoma. Immunohistochemistry revealed VIMENTIN, MELAN A positive with Ki67 approximately 40-45% in favour of Amelanotic Melanoma. **Conclusion:** Amelanotic melanoma is very rare variant of nodular melanoma and with review of literature incidence of amelanotic melanoma over heel is very underscore, these rare things make this article rare from northern India.

KEYWORDS

Amelanotic Melanoma, non-sun-exposed area, Heel lesion, Immunohistochemistry, Dermatology, cutaneous malignancy .

INTRODUCTION

Melanoma is a variant of skin malignancy that originates from melanocytes which gives skin its color. Melanoma is 19th most common cancer worldwide [1]. Melanoma is most perilous skin malignancy accounting for 90% of mortality due to cutaneous malignancy [2]. Melanoma typically occurs in sun exposed areas such as face, arms, legs and rarely happen over non sun exposed areas like palm and sole. Ultraviolet rays are considered most common responsible wavelength of sun light, other risk factors may include weak immune system, fair skin, positive family history, increased individuals' melanin level [3]. Subtypes of melanoma includes - superficial spreading melanoma, nodular melanoma, lentigo malignant melanoma and acral lentiginous melanoma other rare subtypes are naevoid melanoma desmoplastic melanoma spitzoid melanoma and amelanotic melanoma. Amelanotic melanoma is a rare type of malignant melanoma comprising 2-8% of all melanoma cases but real incidence is difficult to estimate due to frequent misdiagnosis [4], characteristic feature of amelanotic melanoma is lack of melanin pigmentation in cells. Melanoma rarely manifests at heel as heel is prevented from sun exposure. There is dearth in literature about amelanotic melanoma over heal with indexed articles review. The purpose of this article is to report a case of amelanotic melanoma over heel with emphasis of immunohistochemistry in every non melanotic lesion of heel.

Case Summary

A 63-year-old male presented with complaint of recurrent growth over lateral aspect of heel on left side for last 2 years after a trivial trauma at same site. On clinical examination, a 6x4 cm fungating growth with irregular margins and bossellated surface present over lateral aspect of left heel and no palpable inguinal lymph nodes (figure 1A). Wedge Biopsy revealed high grade malignant neoplasm. Metastatic and regional imaging investigation excluded tumour invasion in bone and distant soft tissues. Wide local excision of growth with 1cm margin and defect was reconstructed with reverse sural flap (figure 1B). Excisional biopsy suggestive of high-grade malignant neoplasm with possibility of Melanoma or Alveolar soft part sarcoma. The circumferential and base margins were free of tumour. Immunohistochemistry suggestive of amelanotic melanoma (VIMENTIN positive, MELAN A positive with Ki67 approximately 40-45%) (figure 2A-D)

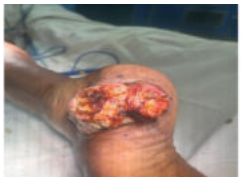
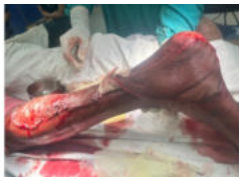

Figure 1 A Showing growth 0ver heel
Figure 1B Showing reconstruction over excised

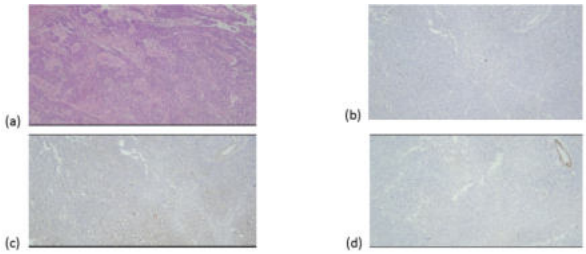

Figure 2 A- D , Showing microscopic and immunohistochemistry staining for amelanotic melanoma

DISCUSSION

Out of all cases of malignant melanoma only 2-8% of cases account for amelanotic melanoma [4], they do not manifest with classical symptoms of melanoma i.e. Asymmetry, Border, Colour, Diameter, and Evolution. Melanoma over foot is very rare so there are high chances of foot lesions to be misdiagnosed as benign foot lesions or other malignant lesions like Bowen's disease and basal cell carcinoma. To reduce the rate of misdiagnosis Bristow et al established CUBED criteria for lesions over foot. In early stages amelanotic melanoma may be misdiagnosed as skin ulcers, traumatic nonhealing ulcers, diabetic foot ulcer due to this patient may get ineffective and inappropriate treatment for long time which will increase risk of stage advancement. The prognosis of amelanotic melanoma is much poorer than those of pigmented melanoma as diagnosis is made in advanced stages of disease after transformation of disease into nodular and vascular lesion.

Clinical presentation of amelanotic melanoma is variable diagnosis of amelanotic melanoma is challenging and is mostly based on histopathological examination and immunohistochemistry staining. On cytology melanoma appears as epitheloid, spindled, or desmoplastic morphology having nuclear pleomorphism, prominent nucleoli and increased mitotic activity and absence of pigmentation [5]. Diagnosis of amelanotic melanoma on cytology is difficult because of absence of pigment. Histopathological examination in our case was not conclusive and left us with two differentials melanoma and alveolar soft tissue sarcoma, hence immunohistochemistry became essential entity for definitive diagnosis.

Immunohistochemically Anti-S-100 has high sensitivity for Amelanotic melanoma other stains such has Vimentin, Melan-A and HMB-45 has also been reported [6,7]. Here in this case, immunohistochemistry revealed VIMENTIN positive, MELAN A

positive with Ki67 approximately 40-45% which confirmed our diagnosis of amelanotic melanoma.

In cases of heel ulcer not showing sign of healing even after medications and it is recommended to carry out biopsy along with immunohistochemistry for early diagnosis of melanoma so that proper treatment can be given before advancement of disease, treatment of amelanotic melanoma comprises surgical excision with wide safety margins. In advanced cases adjuvant therapy may also be considered in patients with features such as ulceration, high mitotic rate or lymph node involvement. But prognosis of amelanotic melanoma is underscore as rapid rate of progression of disease and delayed diagnosis attributed to increased severity of disease [8].

CONCLUSION

Amelanotic melanoma is a very rare variant of nodular melanoma and incidence of amelanotic melanoma over heel is very underscore. As there is no review of this article in index journal from northern India, this article is first in northern Indian with amelanotic melanoma over heel and literature needs more research of such cases incidence, we want this case report to be reported.

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