

Case Report

Nodular Malignant Melanoma: A Rare Case Report in Association with Coronary Artery Disease

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ABSTRACT

Melanoma is a skin cancer that arises from malignant transformation of melanocytes. The clinical presentation of melanomas varies widely. The incidence of melanomas has increased rapidly in the past few decades and incidence of melanoma in non-white population is significantly lower. Nodular melanoma is uncommon in Indian scenario and carries a poor prognosis because of local invasion and early distant metastasis. Herein, we report a case of a large malignant melanoma at an uncommon site in rare association with coronary heart disease.

Keywords: Nodular melanoma, coronary heart disease, poor prognosis.

INTRODUCTION

Melanoma is a skin cancer that arises from malignant transformation of melanocytes. It is predominantly a cancer of white skinned individuals. ^[1] Nodular melanomas are second most common type of melanoma accounting for 15-30% of cases in light skinned individuals. ^[2] Most common in light skinned being superficial spreading type and in dark skinned individuals it is acral lentiginous type. ^[3] Most common site of nodular melanoma is trunk, though, it can develop anywhere in the body. Most frequently it presents in midlife with a median age at presentation of 53 years, it is more common in males than in females. ^[2] It is most commonly dark brown,

red-brown, or red-black and is elevated, dome-shaped, polypoid, or pedunculated. ^[4]

CASE REPORT

A 75 yr old male presents with blackish discoloration and swelling in the left heel since one year. Patient is a known case of hypertension since 10years and coronary heart disease since one year and is on treatment for the same. Initially the lesion was not palpable and only blackish discoloration was noted which was measuring about 0.5×0.5 cm, which gradually increased in size and began to raise above the skin surface since 3months to attain the present size of 4×5×3cm. Since 3months he is also experiencing pain which is dull aching type. Patient gives history of

traumatising the lesion in the initial stages with a blade. There is no history suggestive of any skin or other malignancies in the families.

On examination, a solitary hyperpigmented bluish black nodular mass was found measuring about 4×5×3cm over the plantar aspect of the left heel with regular borders and uniform color with no discharge or ulceration. The lesion was non tender, firm in consistency, non-pulsatile and non-fluctuant. No regional lymphadenopathy noted. Examination of nail, hair, scalp and mucosae were normal

A detailed work up of the patient was done. Complete blood counts showed moderate anemia, chest X ray revealed cardiomegaly, USG abdomen showed grade II prostatomegaly and X ray of skull, foot, CT scan of the head were within normal. Histopathological examination of the biopsy specimen showed a skin tissue fragment having a malignant tumor composed of tumor cells in sheets, nodules and diffuse pattern, infiltrating the deep dermis. The individual tumor cells were large, pleomorphic and vesicular nuclei and very prominent nucleoli. Also seen were extensive areas of fine granular melanin pigment and numerous melanophages and focal acute inflammatory cell infiltration and haemorrhage.

Under the guidance of the surgeons wide local excision with 2 cm margin was done and the tumor removed in toto. The deep resected margins and the lateral margins were uninvolved and free of the tumor. A split skin graft was taken from the left upper thigh and harvested. Patient was reviewed 8days later to look for graft uptake and for suture removal. The graft was rejected with necrosis of the graft. The final diagnosis of nodular malignant melanoma was made and patient followed up. 6 months post-surgery, patient is free of the tumor

without any evidence of metastasis or residual tumor.



Figure 1: A huge nodular blackish growth over the lateral aspect of the left heel



Figure 2: The nodule being excised with 2cm margin



Figure 3: post excision of the nodule



Figure 4: skin graft site after 8 days with signs of failed take-up

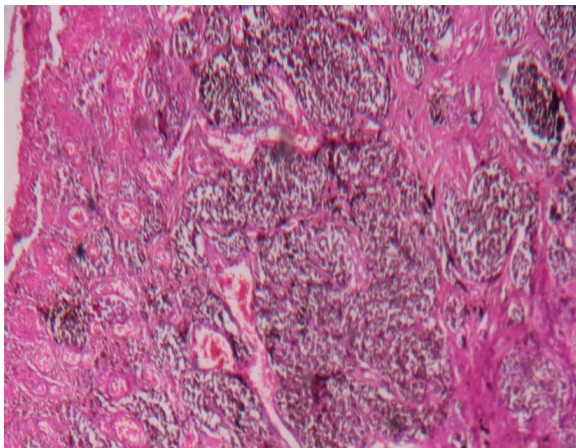


Figure 5 (H and E, 10x): Skin biopsy showing malignant tumor with tumor cells arranged in nodules and sheets infiltrating deep dermis

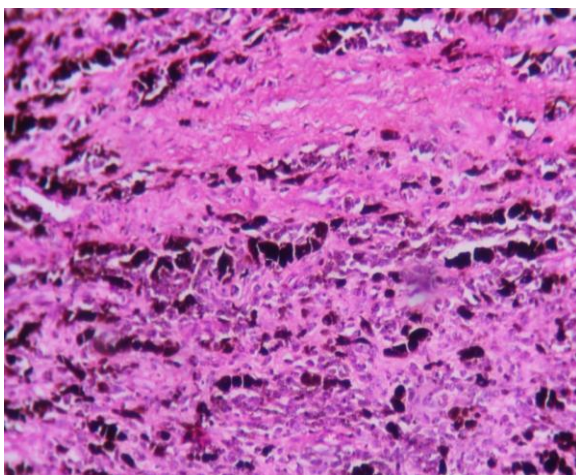


Figure 6 (H and E, 40x): tumor cells arranged in sheets vertically and diffuse pattern

DISCUSSION

Melanoma is a skin cancer that arises from malignant transformation of melanocytes. It is one of the most dangerous tumor as it has the ability to metastasize to any organ, including brain and heart.^[5] It is uncommon cancer in Asian population, however incidence of plantar melanomas is same as in Whites. Although melanoma comprises only 3% of all the skin cancers diagnosed each year, it accounts for about 75% of all deaths due to skin cancers.^[6]

Most common risk factor is increased exposure to ultraviolet radiation, whereas in melanomas on the soles, unrelated of solar exposure, most common risk factor is repeated trauma.^[7]

There are four clinic-histopathological subtypes of malignant melanomas – superficial spreading type, lentigomaligna melanoma, nodular melanoma and acral lentiginous melanoma. Superficial spreading type – accounts for 70% of all the melanomas, occurs during fourth and fifth decade, hallmark is a haphazard combination of many colors, most common site in males in trunk and females in legs. Nodular melanoma – accounts for 15-20% of melanomas, mean age of onset is 53yrs, with rapid growth within weeks to months, most common site is trunk, uniformly dark blue/black raised lesion, early lesions lacks asymmetry with size >6mm. Lentigomaligna melanoma – accounts for 4-15% of all melanomas, most common in seventh and eighth decade, has a slow growth, most common site is sun-damaged skin – head, neck and nose. Acral lentiginous melanoma – accounts for 2-8% of melanomas in Whites and 30-75% of melanomas in Blacks and Asians, mean age is 65yrs, most common site is on palms and soles.^[2,5]

Treatment involves a multimodality approach involving surgery, chemotherapy,

radiotherapy and immunotherapy. Surgery includes resection of the tumor, sentinel lymph node biopsy, lymph node dissection and resection of metastases in selected areas. In early stages, optimum resection of the primary tumor is the initial step. Lymph node dissection has been replaced by sentinel lymph node biopsy and in negative cases, patients are observed, whereas, in positive cases, complete lymph node dissection has to be carried out.^[6]

CONCLUSION

We would like to highlight this case for its rarity in size, site and association.

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