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Case Report

Metastatic Cutaneous Melanoma: A Rare Entity with a Unique Presentation

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Abstract

The occurrence of cutaneous infiltration by malignancies has been accounted to 0.7 %- 9 % of patients suffering with malignant neoplasm and are generally thought to be a late consequence of most neoplasms and the prevalence of malignant melanoma as a primary tumor in one published study was 59 out of 381 patients. We herein report an unusual case of a patient who presented with multiple nodules of varying sizes over the body, which later revealed to be malignant melanoma; both on cytopathology and histopathology examination. As this is a rare, unusual condition in our setting, frequent and timely case reporting is to be done that will ensure the better management and outcome of the disease.

Keywords: *Melanoma, Metastases*

Introduction

Malignant melanoma is known to be prevalent in our society for thousands of years, the initial description documented by the father of Western medicine, Hippocrates. Melanoma is a malignant tumor of melanocytes and they may localize in the skin or other tissues composed of melanocytes, like muco-cutaneous junctions, conjunctiva, iris, choroids and substantia nigra [1-2]. Although incidence of melanoma has increased profoundly in recent years, metastases to skin and subcutaneous tissues from the malignant melanoma is not that heard of. Moreover, most of the cases come for medical intervention very late in their course of disease. But rarely in some cases, could metastases to the skin be the very first presentation of any internal malignancy which could be helpful in directing the management of certain malignant cases.

Case Presentation

A 40 year old male farmer presented with multiple asymptomatic skin coloured nodules of varying sizes on the body since 6 months duration. Physical examination revealed multiple, non-tender, firm to hard nodules varying in size from 2 to 5 cm with free overlying skin and fixation to underlying structures; some with pigmentary changes in the surface; distributed over the trunk, axilla, bilateral upper and lower extremities, inguinal region [Fig.1, 2, 3].

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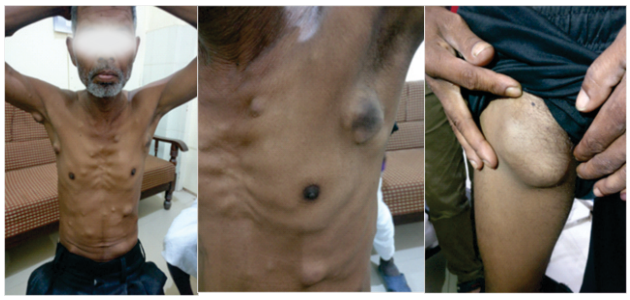

Figure: Multiple nodules of varying sizes in trunk, abdomen (1), bilateral axilla (2) and inguinal region (3)

Fine needle aspiration cytology from a nodule on the back revealed a highly cellular smear with markedly dispersed cells with variable anisokaryosis and pleomorphism; individual cells with well-defined irregular cell membrane, abundant cytoplasm and frequent predominant large presence of macromolecule and binucleate cells [Panel A].

An excision biopsy from a nodule in right arm demonstrated the skin and subcutaneous tissues with atypical cells arranged in diffuse sheets and nests infiltrating into the dermis [panel B] ; individual cells having round to spindle shape, displaying moderate pleomorphism, vesicular chromatins and prominent nucleoli [panel C]. Occasional atypical mitosis with extracellular melanin pigment deposition seen [panel D].

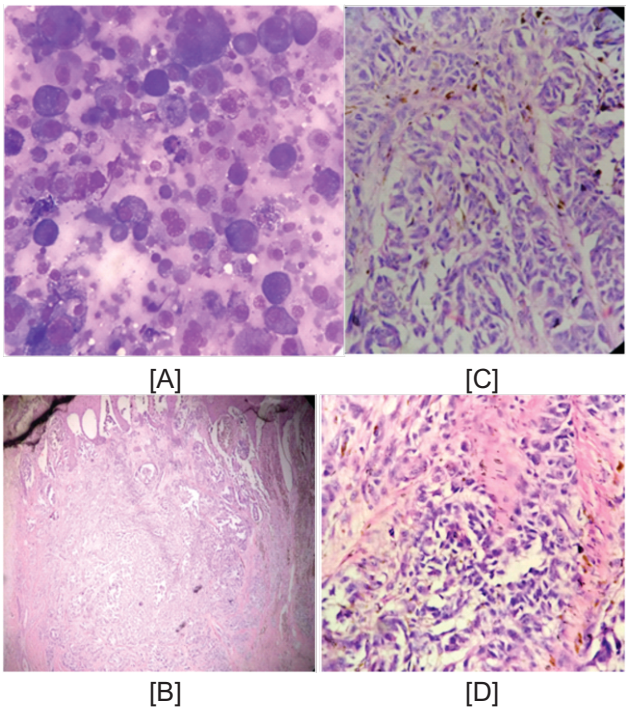

Figure: FNAC from the skin nodule [A]; skin biopsy from nodule [B, C, D]

Discussion

The exact etiopathogenesis of cutaneous malignant melanoma is unknown. Various studies were undertaken and these demonstrate a role of genetic factors and ultraviolet radiation in development and progress of melanoma. The culprit gene is said to be located on chromosome 9p21; known as CDKN2A (cyclin dependent kinase) which encodes for 2 separate gene products that functions as negative regulators of cell cycle progression, in other words tumor suppressor genes [3]. Spread occurs via lymphatics or by hematogenous dissemination. The initial site of metastatic disease is skin, subcutaneous tissue and lymph nodes in 59% of patients [4]. Hematogenous dissemination give rise to widespread metastasis as was observed in our patient. Moreover, in about 4% of patients with metastases, no primary tumor could be determined as in our case. The predominant hypothesis for such melanoma of primary unknown involves spontaneous regression of melanoma from a known primary site; the regression likely contributed by immune-mediated mechanisms [both cell-mediated and humoral immunity]. Alternatively, it also could be explained by the presence of ectopic melanocytes or the differention of melanocytes from preexisting pluripotent stem cells within subcutaneous tissue, lymph nodes, or visceral organs [5].

Melanoma-associated antigen protein S100, melanoma inhibiting activity (MIA), and the melanin precursors 5-S-cysteinyl-DOPA and the ratio of L-DOPA/L-Tyrosineare the most specific and sensitive test to detect metastatic disease. The potential surrogate marker for subclinical residual disease is detecting circulating melanoma cells in blood. For this purpose, mRNA of tyrosine is the best target for detecting circulating metastatic melanoma cells by real time polymerase chain reaction (RT-PCR) [6].

Treatment for metastatic diseases is very unsatisfactory. Many drugs such as dacarbazine, timozolamide, vinca alkaloids, nitrosureas, tamoxifen and immunotherapy are in use with differing results [4].

The death of the patient due to cutaneous metastatic melanoma is completely preventable by excision of lesions at an early stage. As we all can conclude, metastatic nodules carries avery poor prognosis. In regard to numerous lesions in our patient, surgery could not be contemplated and he was advised accordingly but ultimately was lost for follow up.

Conclusion

As this is a rare, unusual condition in our setting, frequent and timely case reporting is to be done that will ensure the better management and outcome of the disease.

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