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METASTATIC MALIGNANT MELANOMA - A CASE REPORT

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Abstract :
Melanoma is a malignant neoplasm of melanocytes innate to the skin and other sites. Melanoma accounts for 1 to 3 of all malignancies. Melanoma is commonly known to metastasis to lymph nodes, and adjoining skin and subcutaneous tissue. Metastatic deposition in liver, lung and spine are rarely reported. We present here a case report of malignant melanoma with multiple metastases for its rare clinical presentation.

Keyword :
malignant melanoma, multiple metastasis.

INTRODUCTION:

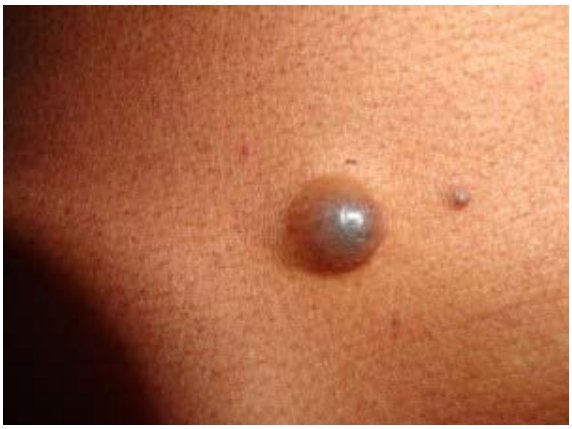
Malignant melanoma is a neoplasm of melanocytes or of their progenitor cells. Melanoma though uncommon, has increased over past decades by averages ranging from 3 to 8% per year and continues to rise. Melanoma is estimated at 5% and 4% of cancer in males and females in 2009 and it is the fifth and sixth most common type of cancer in males and females respectively [1]. The majority of melanomas arise from the skin,while the eyes, mucosa, gastrointestinal tract, genitourinary tract, and leptomeninges are also reported[2]. Melanomas originate from melanocytes, that evolve from neural crest cells and migrate to the epidermis, uvea, meninges, or ectodermal mucosa[3]. Melanomas are reported to develop in or near previously existing precursor lesion or in healthy-appearing skin. A malignant melanoma may develop in healthy skin de novo, without precursor lesions. Melanomas may be induced by UV irradiation, and considered to arise from precursor lesions like common acquired nevus, dysplastic nevus, congenital nevus, and cellular blue nevus[4]. Melanoma is an aggressive and highly metastatic disease, and can spread beyond the local area into non contiguous skin, subcutaneous tissue, lymph nodes away from the original tumor, lungs, liver, brain, and bone. Metastasis to other sites like adrenal glands, spleen, gastrointestinal tract, and heart are also reported.Approximately 4% of newly diagnosed melanoma patients present with a rarely more aggressive form of

the disease termed Metastatic Melanoma with distant metastasis at initial diagnosis. Metastatic melanoma is a fatal disease with a rapid systemic dissemination. The 5-year survival rate is less than 15% in patients with metastatic disease[1,5]. We present here a case report of one our patients who presented aggressive form of Metastatic Malignant Melanoma.

CLINICAL VIGNETTE:

A 64 year old women, farm labourer presented to the surgical OPD with complaints of multiple swellings over the trunk, breast, and right arm. She had low back ache since last two months.[fig1,2]. These swelling were initially painless, but later became painful. She had an infected mole on the back which was excised, but she had no medical records. The swellings on the trunk were soft in consistency 4cms in diameter, while the swellings in the right arm were nodular, firm, focally appearing cystic, of 8cms diameter. The breasts revealed masses of size 5x4x4cms each in the upper outer quadrants. She also had a firm swelling over the pre-sternal region of chest of 5cms in diameter. A nodular swelling was also seen over the left leg showed a blackish hue. No lymph node enlargements were palpated.The patient was investigated. A **c**omplete blood counts revealed anemia with a hemoglobin of 3.8g/dl, all other parameters were normal. The peripheral smear revealed a microcytic hypochromic blood picture. All basic biochemical parameters were normal. Radiological assessment was done. A CT scan of the chest revealed opacities, that were opined as metastatic deposits of lung. (fig3). A CT scan of the abdomen revealed opacities in the substance of the liver, which were opined as metastatic deposits of liver. An MRI of the Dorsolumbar Spine was opined as lymphomatous deposits in spine with lytic collapse of D10 vertebrae. She was referred to the Cyto-Pathology Division for FNAC of the skin and breast lesion. FNAC was performed on all all surface lesions as per standard operating procedures. Smears from all the sites revealed sheets and clusters of round cells with scant cytoplasm, large round nucleus, variable chromatin condensation (fig4-6). A cytological diagnosis of Lymphoma was given. Biopsy from skin nodule over arm was received The histopathological examination showed skin with the dermis showing an ill circumscribed tumour composed of sheets of round to oval cells with scant cytoplasm round nucleus, variable chromatin, few mitotic figures. (fig7,8). A differential diagnosis of cutaneous lymphoma, merkel cell carcinoma, small cell carcinoma metastasis from possible lung primary was considered An immunohistochemical panel was chosen. The Tumour cells were positive for HMB45 (fig9), S100 (fig10) and Ki67 (7-8% positivity), while it was negative for Pan cytokeratin, CD45, CD68, CD1A, CD34, EMA and SMA. A diagnosis of malignant metastatic melanoma was sent out. An immunohistochemical panel was chosen. The Tumour cells were positive for HMB45 (fig9), S100 (fig10) and Ki67 (7-8% positivity), while it was negative for Pan cytokeratin, CD45, CD68, CD1A, CD34, EMA and SMA. A diagnosis of malignant metastatic melanoma was sent out. DISCUSSION: Metastatic melanoma is an aggressive form of melanoma with distant visceral metastases seen in approximately 25% of these metastatic melanoma patients, making the present patient reported more rare. The most common sites of visceral metastases were the lung (18–36%), brain (12–20%), liver (14–20%), and bone (11–17%) [6]. Metastatic melanoma has a

comparatively poorer prognosis with a median survival of 6 to 8 months, and a 1-year survival rate of 45%. Less than 10% of these patients live for 5 years or more. Prognostic factors that predict survival in these patients with Metastatic Melanoma, include site of the first metastases, number of metastatic sites, and duration of remission [6, 7].The site of distant metastasis is also an important independent predictor of survival in patients with metastatic melanoma[8]. The AJCC analysis of 17600 melanoma patients by C.M.Balch et al (2001), reported that loco-regional, distant nodal, and soft tissue metastasis had better survival rates compared to patients with visceral metastasis[9]. It was reported that patients in whom lung was the only site of visceral metastasis the one year survival was better compared with those with metastasis in multiple visceral sites. This patient reported here presented with multiple visceral metastasis.



J. E. Gersenhenwald et al (2008)[10] reported on 4895 melanoma patients, with marking them as 3 groups namely : (1) melanoma metastasis to visceral sites other than the lung (M1C) with a median survival of 7 months, (2) melanoma metastasis with lung metastases with median survival of 12 months, (3) melanoma metastasis with metastasis to non-visceral sites like non contiguous skin and subcutaneous tissue, distant lymph nodes with a median survival of 18 months. This patient reported here presented with multiple visceral metastasis involving the lung, liver and non visceral sites like skin and subcutaneous tissue and breast. It is reported that metastatic melanoma with visceral metastases to sites other than lungs, like liver, brain, or bone, have a very poor median survival ranging from 3 to 6 months. Similarly it is reported that patients with one distant metastatic site have a significantly improved outcome compared with those with two or more distant sites[8]. The number of metastatic sites is reported to be the most significant prognostic factor in patients with metastatic melanoma[11]. Patients whose initial site of metastases was the liver or brain had a median survival of only 4 months compared with patients whose initial sites were the skin and/or lymph nodes, who had a median survival of 15 months[12]. We report this patient here to highlight that, the prognosis of malignant melanoma worsens with m etastasis. This worsens still with multiple visceral sites, though rare, needs to be considered in patients during the work up for metastasis with unknown primary.

Fig2: Clinical Photograph of nodules over back

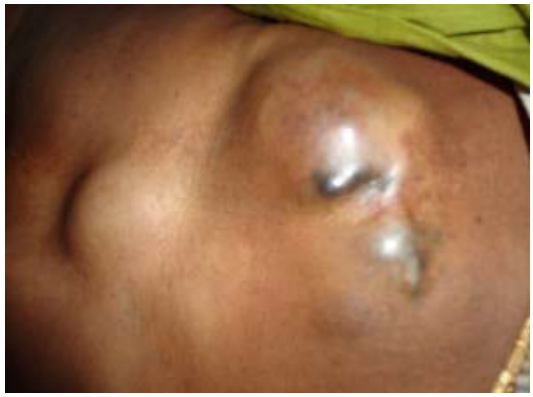


Fig1: Clinical Photograph of multiple swellings over trunk

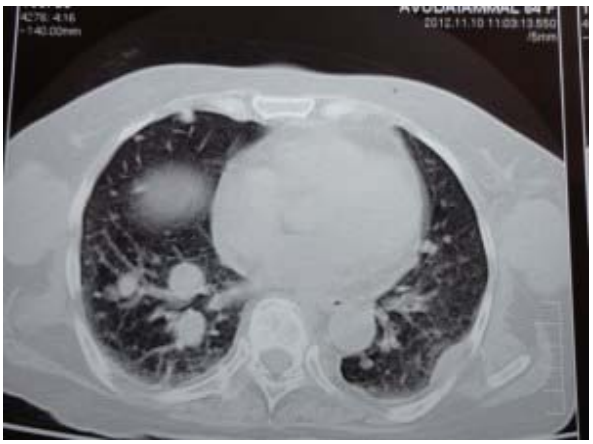


Fig3: Photograph of CT scan of chest showing opacities

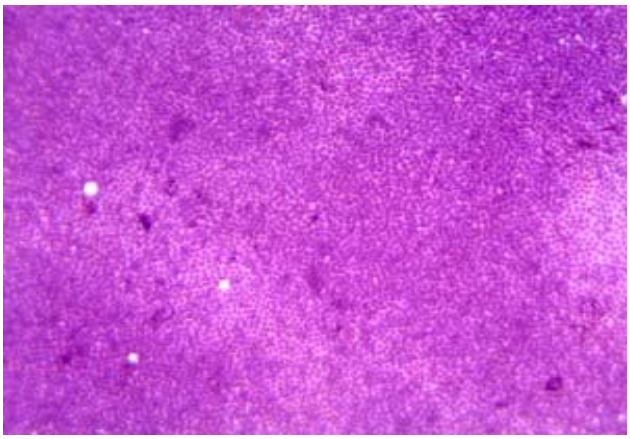


Fig4: Photomicrograph of aspirate from trunk mass showing sheets of round cells with scant cytoplasm ,round nucleus.(H&E-100X)

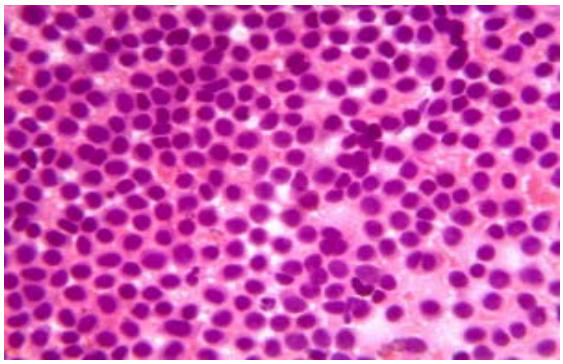


Fig5: Photomicrograph of aspirate from trunk mass showing sheets of round cells with mild amount of cytoplasm , round nucleus and variable chromatin(H&E-400X)

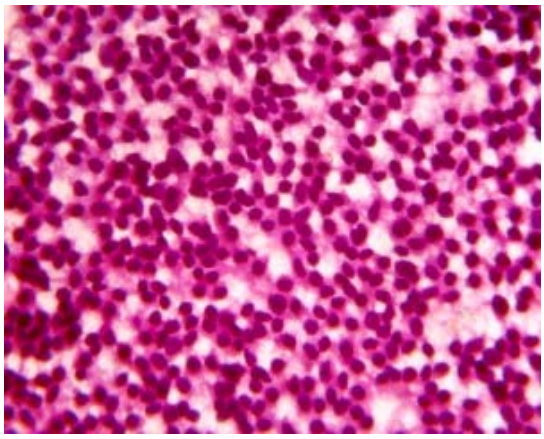


Fig6: Photomicrograph of aspirate from breast mass showing mildly cohesive clusters of round to oval cells (H&E-400X)

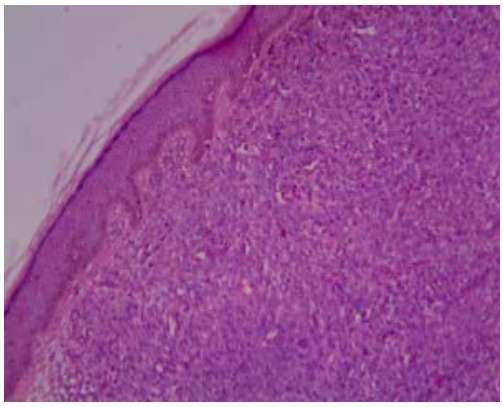


Fig7: Photomicrograph of biopsy from skin nodule showing normal epidermis with sheets of tumour cells beneath it(H&E100x)

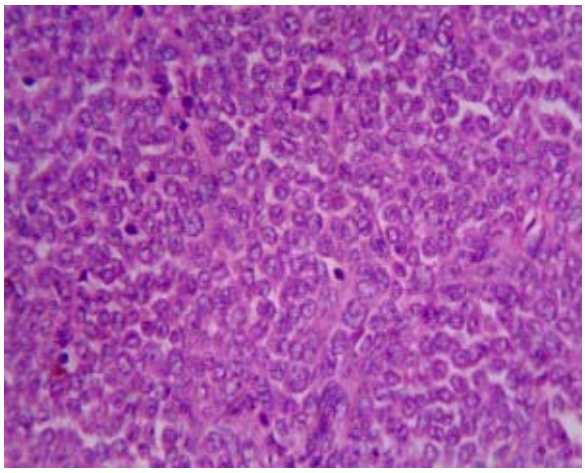


Fig8: Photomicrograph of biopsy from skin nodule showing sheets of round cells with eosinophilic cytoplasm and round nucleus(H&E400x)

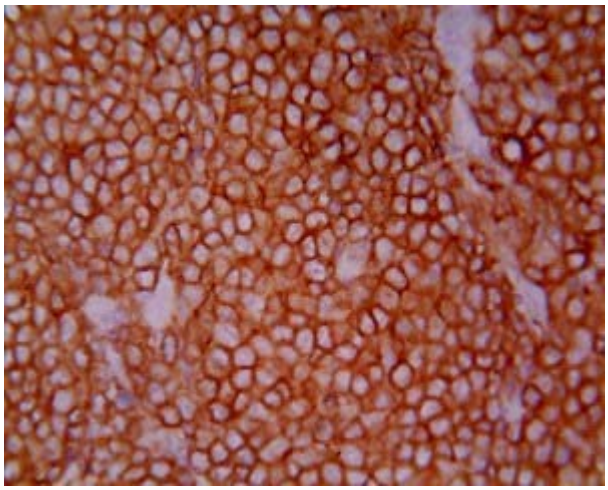
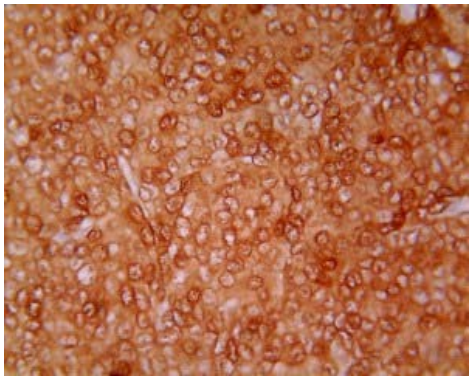


Fig9: Photomicrograph of tumour cells showing HMB45 positivity in tissue biopsy (400x) Fig10: Photomicrograph of tumour cells showing S100 positivity in the tissue biopsy(400x)



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