



Case Report

Metastatic melanoma as femoral vein deposits: A case report

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ABSTRACT

Malignant melanoma is most dangerous of all skin cancers. It is strongly linked to mutations caused by UV radiation in sunlight. Melanoma most commonly arises from the skin, other sites are oral, anogenital mucosal surface, oesophagus, meninges and uvea of the eye. We present a case of metastatic melanoma in right inguinal lymph nodes along with femoral vein deposits whose primary lesion was in skin over right foot. Single distant metastasis had a longer survival than patients with two metastatic sites or a combination of three or more. Due to patient's negligence and limited knowledge, malignant melanoma becomes a dangerous skin cancer. It start with a painless induration (very small size) and gradually growing in thickness. On further disease progression, regional lymph node involvement is seen and later metastasize to other sites. This make the disease with very less survival outcome.

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1. Introduction

Malignant melanoma is one the most dangerous of all skin cancers. It is strongly linked to acquired mutations caused by exposure to Ultraviolet(UV) radiation in sunlight. Melanoma most commonly arises from the skin, other sites are oral, anogenital mucosal surface, oesophagus, meninges and uvea of the eye.¹ The majority of the melanomas arise after puberty but can also occur in children. Malignant melanoma spreads by growing along the dermoepidermal junction and upper dermis and later by invading the deep dermis and later to subcutis and deeper structures. Metastasis in regional lymph node are common even if nodes appear clinically negative. The behavior of malignant melanoma is very unpredictable as deaths have been registered for 15 or more years after initial therapy. The death rate is still unacceptably high even if diagnosed at stage where cure is possible.² We present a case of metastatic melanoma in femoral vein and inguinal lymph node whose primary lesion was in skin over right foot. FNAC, HPE and IHC confirmed the diagnosis of metastatic

melanoma.

2. Case Report

A 58 years old male, a follow up case of malignant melanoma. The patient had a skin lesion over the right foot since 2014 which was painless and gradually progressed until 2017 when it was operated. After 1½ year period of operation history, he complained of swelling over right inguinal region. USG Abdomen showed few enlarged homogeneously enhancing soft tissue attenuation lesion measuring approximately 2.0 x 1.7 cm in right inguinal region(lymph nodes). Adjacent fat plane stranding is noted. Few of them were seen extending up to skin and subcutaneous tissue. They are lying adjacent to the inguinal vessel however fat plane was noted to be maintained. On Fine needle aspiration cytology(FNAC) from right inguinal swelling, blood mixed material was aspirated. Microscopically smears were cellular showing atypical cells disposed in loose clusters as well as lying singly. Individual tumor cells were pleomorphic, having hyper chromatic, eccentric nuclei with prominent nucleoli and abundant cytoplasm. Occasional bi nucleated and multi nucleated

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forms were also seen. Patient was later operated, wide local excision with right inguinal lymph node dissection was done. On histopathological examination, grossly 2 specimens were received with right inguinal lymph nodes in one container and femoral deposits in the other container. Out of 9 lymph node from the right inguinal dissection, 6 lymph nodes were positive for metastatic tumor deposits. 3 lymph nodes were identified from femoral vein deposits. Microscopically, sections from femoral vein deposits also shows 3 lymph nodes with effaced nodal architecture and infiltrated by malignant neoplasm comprising oval to spindle atypical cells with high nuclear cytoplasmic ratio, vesicular chromatin, conspicuous nucleoli and scant cytoplasm. Sections from right inguinal lymph nodes showed 6 out of 9 lymph nodes to have effaced nodal architecture and infiltrated by malignant neoplasm as above described morphology.

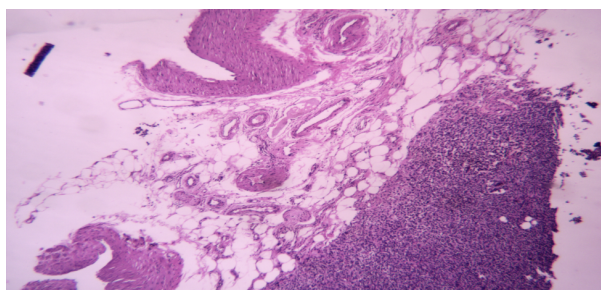


Fig. 1: Lymph node involvement around femoral vein

On further immunohistochemistry, Tumor cells showed strong positivity with HMB45 and Vimentin, focal positive for Myogenin and negative for Desmin and Cytokeratin. Histomorphology and Immunohistochemistry is consistent with diagnosis of Metastatic Melanoma.

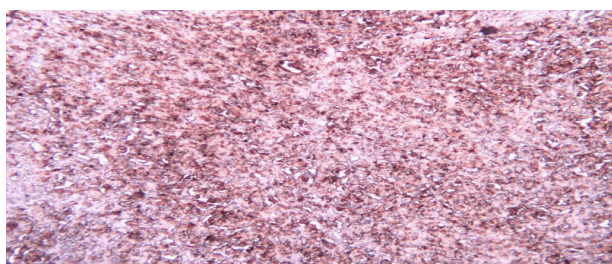


Fig. 2: HMB45 positive

3. Discussion

Malignant melanoma is highly aggressive skin tumor, it spreads by growing along the dermoepidermal junction and upper dermis and later invades the deep dermis, subcutis and into deeper structures. Distant metastasis occur most often in liver, lungs, gastrointestinal tract, bone and central nervous system but can occur anywhere.² Ultrasound

sonography(USG) abdomen showed nodal involvement and fat stranding upto skin and subcutaneous tissue. FNAC was done from the regional lymph node and later wide local excision. The diagnosis of Metastatic melanoma was confirmed on basis of Histopathological examination(HPE) and Immunohistochemistry(IHC). The patient was then advised for radiotherapy and chemotherapy, but they refused further treatment in our institute. They shifted to higher centre in Mumbai for further workup. He developed metastasis in lung and brain on 2020. Bad prognosis was already explained to the patient. Patient eventually expired on August 2020 due to multi organ involvement. According to Mehmet Ali Erkurt et al., metastatic melanoma usually involves draining lymph nodes and occasionally adjacent skin first and then metastasizes to distant visceral sites. Skin and subcutaneous lymph nodes(59%) are most commonly involved followed by lung (36%), brain(20%), liver(20%), bone(17%) and others(12%).³ Cutaneous and subcutaneous metastasis located between the site of primary tumor and regional lymph node are referred to as “in transit metastasis”. Cutaneous metastasis from melanoma can be difficult to distinguish from a primary lesion because metastasis may develop a secondary intraepidermal metastasis(epidermotropic metastasis). An important differential feature between primary and metastatic malignant melanoma is that in metastatic carcinoma, melanoma with secondary intraepithelial spread is seen and the dermal component is very wider than the epidermal component whereas opposite is seen generally in primary lesion.² According to Charles M. Balch et al. patients with a single distant metastasis had a longer survival than patients with two metastatic sites or a combination of three or more. The 12-month survival rate was 36% for 1 metastatic site, 13% for 2 sites and 0% for 3 or more sites.^{3,4} Takai et al. reported a case of cutaneous malignant melanoma on buttock of a 78-year-old woman with huge metastasis in to inguinal lymph node and femoral vein invasion.⁵ Only few cases have been reported with femoral vein deposits. The prognostic impact is still unknown.

4. Conclusion

Multi organ involvement in malignant melanoma has a huge role in years of survival. Notoriously the death rate of malignant melanoma is still high even after lesion diagnosed at early stage where there is possibility of cure. The disease start with painless induration with very small size and gradually grow in thickness. Then metastasize to regional lymph node and later to other metastatic sites. With patient's negligence and limited knowledge of malignant melanoma, it has made the disease with very less survival outcome. Further study is required to evaluate the prognostic impact of femoral vein metastatic deposit as only few cases are reported till now.

5. Source of Funding

None.

6. Conflict of Interest

Authors have no conflict of interest/competing interest to declare.

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