Acral lentiginous melanoma with multiple brain metastases in an Indian male

Sir,

India enjoys a low incidence of malignant melanoma (MM), which could be attributed to under-reporting and missed diagnosis.[1] Cancer registries in India report that the age-specific incidence rates for cutaneous MM are less than 0.5 per 1,000,000.[2] In a retrospective analysis done by Vijayakumar *et al*., acral melanomas constituted 26% of all melanomas and the sole of the foot was found to be the dominant site (35 of 36 cases).[3] Dermoscopic findings can distinguish acral lentiginous melanoma from other conditions and aid in early diagnosis. Excision biopsy is the best way to study the pathology and depth. Histologically, the tumor is characterized by lentiginous and some nesting proliferation of atypical melanocytes that may be surrounded by a halo giving a lacunar appearance. Some of the melanocytes may have dendritic processes. The invasive dermal component may be composed of spindle or epithelioid cells or nevus-like cells. The diagnosis of acral lentiginous melanoma during the radial growth phase is often difficult, but treatment in this phase offers an excellent prognosis.[3] S-100 protein, HMB-45, MART-1, vimentin, epithelial membrane antigen (EMA), and CAM 5.2. are the immune-histochemical markers used in the detection of acral lentiginous melanoma of which S-100 protein and HMB-45 are considered as sensitive markers for recognizing acral lentiginous melanoma.

A 70-year-old man was brought in unconscious with acute onset right-sided hemiparesis. His blood pressure was low, other systems were clinically normal. Dermatological examination revealed an irregular blackish-blue plaque with central ulceration over the right heel. Skin over the sole showed, areas of depigmentation. There were multiple hard ipsilateral inguinal lymph nodes [Figure 1]. He was diagnosed as having acral lentiginous melanoma with multiple secondaries. Fine-needle aspiration cytology of the lymph node yielded blackish aspirate and showed a moderately cellular smear with discrete population of malignant cells exhibiting pleomorphism, hyperchromasia, prominent nucleoli having moderate to abundant cytoplasm with intense brown-black pigment. Occasional pigmented tumor giant cells were seen. Histology of the plaque showed a poorly circumscribed neoplasm composed of atypical melanocytes arranged as clusters and nests infiltrating into the reticular dermis with evidence of pagetoid spread. Cells were polygonal to spindle shaped having pleomorphic hyperchromatic nuclei with prominent nucleoli and abundant cytoplasm with extensive melanin pigmentation, compatible with a diagnosis of acral lentiginous melanoma showing vertical growth phase [Figure 2a–c]. Computed tomography (CT) scan of the brain showed multiple, hyperdense hemorrhagic metastases with disproportionate edema involving bilateral frontal and parietal areas of the cerebral cortex [Figure 3]. Ultrasonogram showed multiple enlarged lymph nodes with cystic degeneration and loss of central hilum on the right inguinal region suggestive of metastatic nodes. Chest radiography and computed tomography of the chest and abdomen showed no abnormality. Prognosis was explained and patient was given supportive treatment.

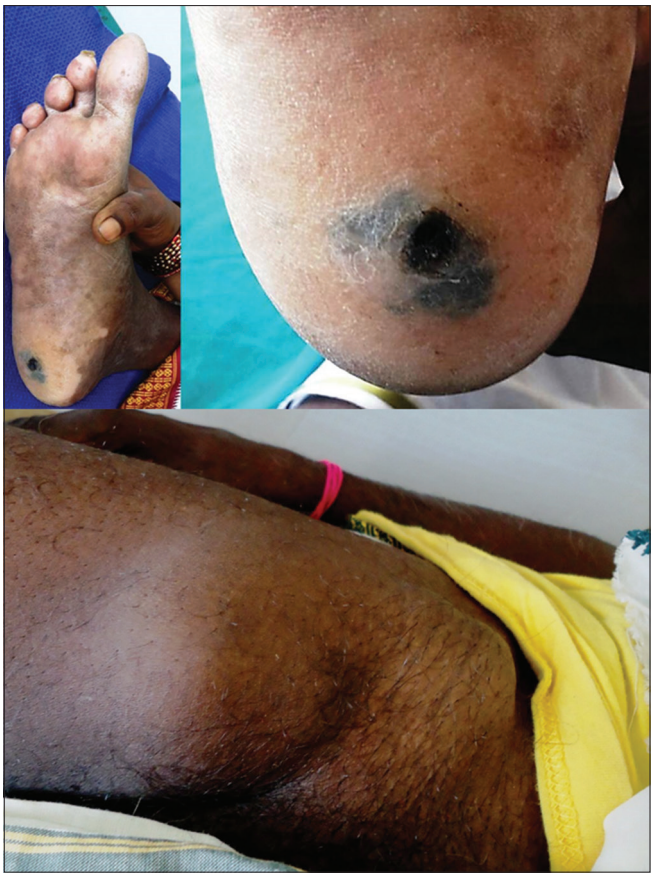

Figure 1: Irregularly pigmented plaque with central ulceration and depigmentation of the surrounding skin of the sole and enlarged matted hard inguinal lymph nodes

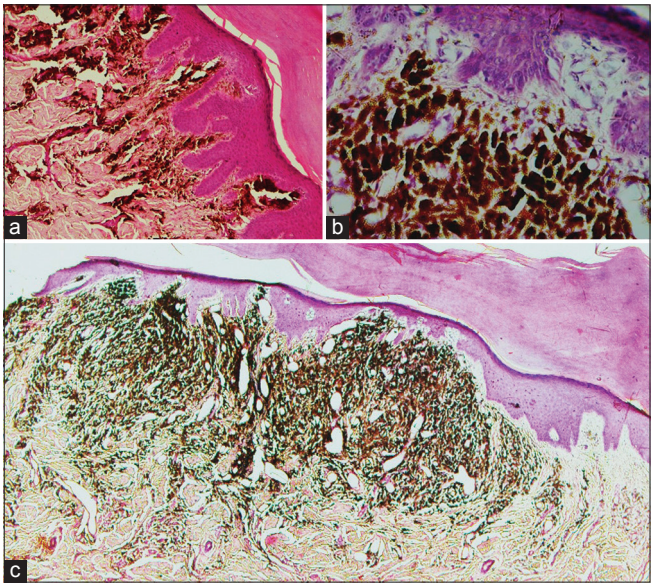

Figure 2: (a) Melanoma cells showing vertical growth phase. H and E ×100 (b) Atypical Melanoma cells with pleomorphic hyperchromatic nuclei, prominent nucleoli and abundant cytoplasm with extensive melanin pigmentation. H and E ×400 (c) Poorly circumscribed neoplasm with evidence of pagetoid spread. H and E ×100

MM is known to metastasise to the central nervous system but only about 7% of the brain metastases manifest at the time of initial diagnosis.[4] However, it is rare for acral lentiginous melanoma to develop brain metastases. Male gender; wide, thick, deeply invasive, or ulcerated primary lesions; involvement of mucosal surfaces, head, neck and trunk; more than three regional lymph nodes; visceral metastasis at the time of diagnosis are risk factors for developing brain secondaries while multiple brain lesions indicate poor prognosis. Most of these were present in our case. There are reports of brain metastasis from multiple primaries.[5] Pulmonary metastasis from acral lentiginous melanoma occurring long after the excision of primary tumor has also been reported.[6] Solitary brain metastasis from acral lentiginous melanoma can be successfully treated with whole brain radiotherapy.[7] However, to the best of the authors' knowledge, a report of multiple secondaries of the brain from acral lentigenous melanoma could not be found in the Indian literature. There seems to be a higher incidence of metastatic disease in vitiligo-associated

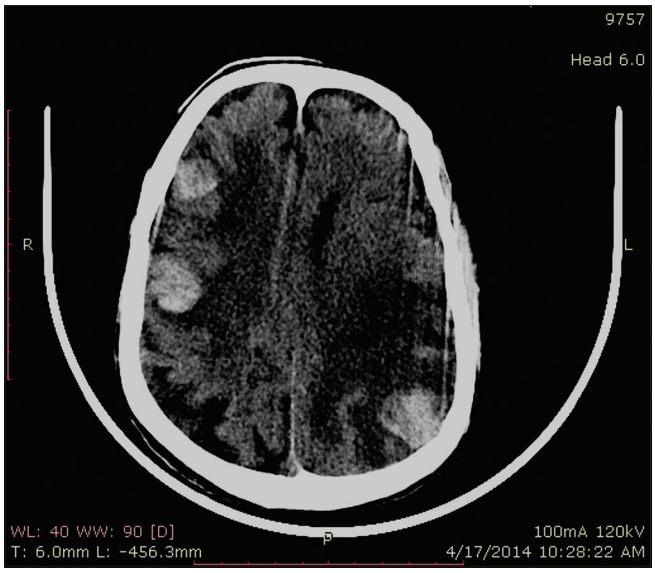

Figure 3: Computed tomography scan of the brain showing bilateral hyperdense metastases

melanoma. Perilesional depigmentation has been reported in metastatic melanoma.[8] This is the first Indian report of multiple brain metastases in acral lentiginous melanoma with acute hemiparesis as the presenting manifestation. It was noteworthy that he also had vitiligo. Since the chance of late metastasis cannot be ruled out even in treated cases, it is emphasized that all patients with acral lentiginous melanoma should be thoroughly investigated and followed up for a life time as brain metastases can be effectively treated when detected early.

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Conflicts of interest

There are no conflicts of interest.

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