

Bowen's disease as differential diagnosis of any pigmented lesion, along with malignant melanoma.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the journal. The patient understands that his name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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Dermoscopic features of cutaneous metastases from breast carcinoma: A report of three Indian patients

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Sir,

Dermoscopic features of cutaneous metastases from internal malignancies have been documented in only a few reports, predominantly in fair-skinned population.^{1,2} Here, we describe the dermoscopic features of cutaneous metastases from breast carcinoma in three Indian patients.

Case 1: A 36-year-old female, with a previous history of left breast carcinoma treated with modified radical mastectomy and adjuvant radiotherapy one year back, presented with skin-coloured translucent to hyperpigmented papules and clear fluid-filled vesicles on the left mammary region and abdomen for the last three months. These skin lesions appeared

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Figure 1: Patient 1: Skin-coloured to hyperpigmented papules and clear fluid-filled vesicles on the left mammary region and abdomen on a background of ill-defined reddish-brown induration. There are focal areas of depigmentation and overlying erosions

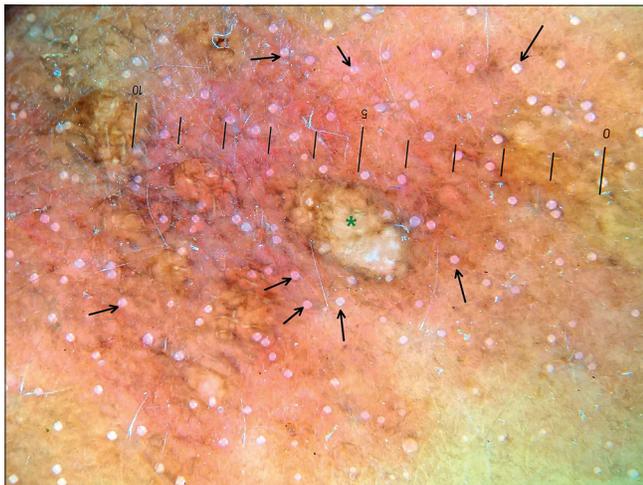


Figure 2a: Patient 1: Dermoscopic examination (polarized, $\times 16$; Heine Delta 20T, Heine Optotechnik, Herrsching, Germany) of a translucent papule on breast showing yellow-white lacunae separated by thin brownish septae (green star), with background erythematous structureless areas and multiple, scattered small round whitish clods (black arrows)

to be arranged in linear horizontal bands, on a background of ill-defined reddish-brown induration along with focal areas of depigmentation and overlying erosions [Figure 1]. Polarized dermoscopy of the papules and vesicles showed

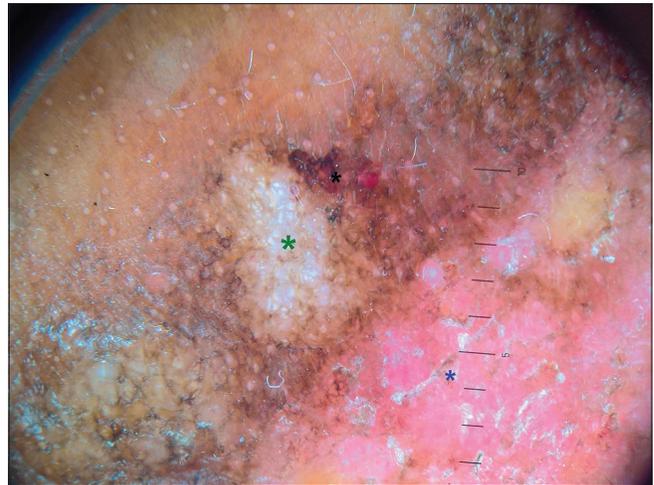


Figure 2b: Patient 1: Dermoscopic examination (polarized, $\times 16$; Heine Delta 20T, Heine Optotechnik, Herrsching, Germany) of a papule on abdomen showing yellow-white lacunae separated by thin brownish septae (green star) with adjacent small red lacunae (black star), structureless whitish areas with pinkish hue and mild scaling (blue star)

well-defined yellow-white lacunae separated by thin brownish septae, some of which had adjacent smaller red lacunae. Background showed erythematous structureless areas and multiple scattered small round whitish clods. The depigmented lesions showed structureless whitish areas with pinkish hue and mild scaling [Figure 2]. Skin biopsy from the plaque as well as papule showed tumour nests in the dermis. Lymphovascular invasion was noted in the biopsy from papule [Figure 3].

Case 2: A 43-year-old female presented to us with ill-defined, erythematous, firm plaques on the right mammary region [Figure 4] for 1 month. She had been diagnosed with bilateral breast carcinoma eight months back, which had been treated with neoadjuvant chemotherapy and bilateral modified radical mastectomy. Polarized dermoscopy showed short, branched linear vessels focally and a background erythematous structureless areas, while the mastectomy scar showed reddish clods and adjacent short curvilinear vessels [Figure 5]. Skin biopsy showed diffuse dermal pattern of metastases from breast carcinoma [Figure 6].

Case 3: A 54-year-old female, with right breast carcinoma operated 18 months back, presented to us with grouped, skin-coloured, firm papules and violaceous papules and nodulo-plaques on the right mammary region, along with pitting edema of the right arm [Figure 7]. Polarized dermoscopy of the violaceous plaque showed asymmetric blue-black ovoid nests of variable size, focal clustered gray dots and pigment network, an erythematous structureless zone with parallel whitish streaks and short branched vessels. Skin coloured papules showed branching linear vessels on a background of structureless erythematous areas [Figure 8]. Skin biopsy confirmed the diagnosis of breast carcinoma cutaneous metastases [Figure 9].

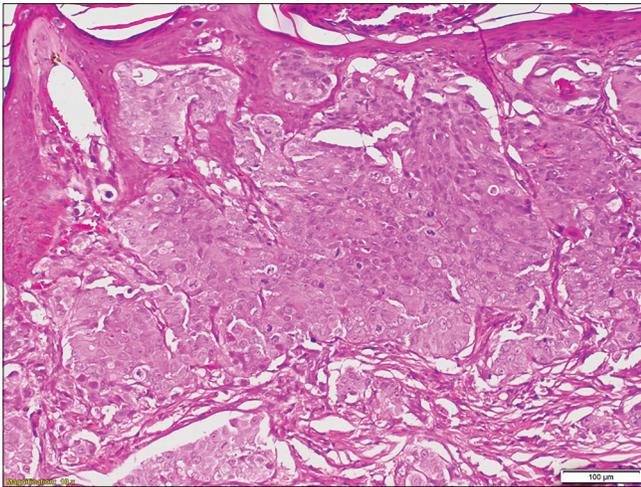


Figure 3a: Patient 1: Skin biopsy shows sheets of tumor cells arranged in groups and clusters involving the papillary dermis. Cells are polygonal with large hyperchromatic nuclei, prominent eosinophilic nucleoli and high nuclear-cytoplasmic ratio. Brisk mitosis are present (H and E, $\times 100$)

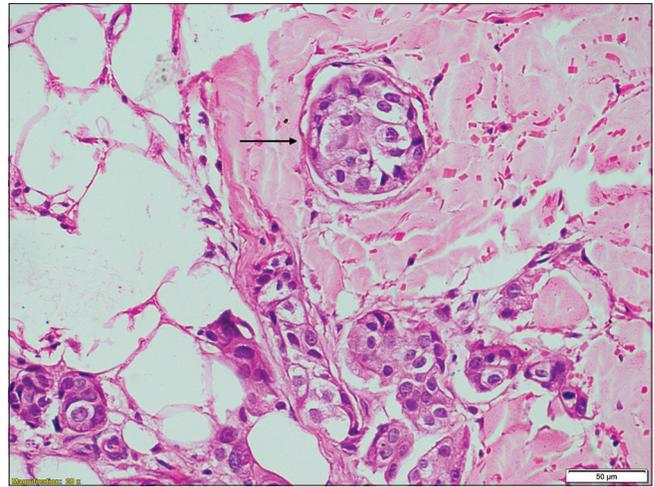


Figure 3b: Tumour emboli within the vascular lumen (black arrow) in deeper dermis (H & E, $\times 200$)



Figure 4: Patient 2: Ill-defined, erythematous, firm plaques on the right mammary region



Figure 5a: Patient 2: Dermoscopic examination (polarized, $\times 16$; Heine Delta 20T, Heine Optotechnik, Herrsching, Germany) of the skin over mastectomy scar showing reddish clods (black star) and adjacent short curvilinear vessels (blue star)

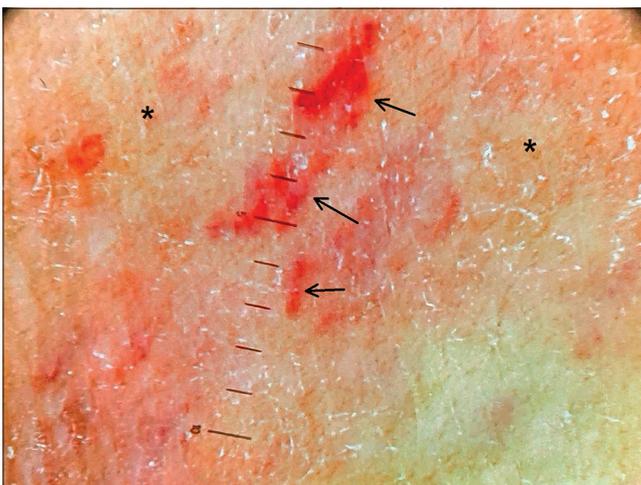


Figure 5b: Patient 2: Dermoscopic examination (polarized, $\times 16$; Heine Delta 20T, Heine Optotechnik, Herrsching, Germany) of the ill-defined plaque showing short branched linear vessels focally (black arrows) and background erythematous structureless areas (black star)

Dermoscopic features of cutaneous tumours such as basal cell carcinoma, Bowen’s disease and melanoma are well-described; however, there is relative paucity of literature regarding cutaneous metastases from internal organ malignancies. Chernoff *et al.* reported dermoscopic findings in cutaneous metastases arising from various underlying malignancies in 20 patients, six of whom had breast carcinoma. Of these, 17 lesions were non-pigmented and 3 were pigmented. Dermoscopy of the non-pigmented lesions was characterized by a vascular pattern, most frequently serpentine (linear irregular) vessels ($n = 13/17$), followed by branched ($n = 9/17$), dotted ($n = 4/17$) or comma-shaped vessels ($n = 3/17$), and homogenous pink areas without discrete vessels ($n = 2/17$). More than half (59%, $n = 10/17$) of the lesions showed a polymorphous vascular pattern. The three pigmented lesions, all

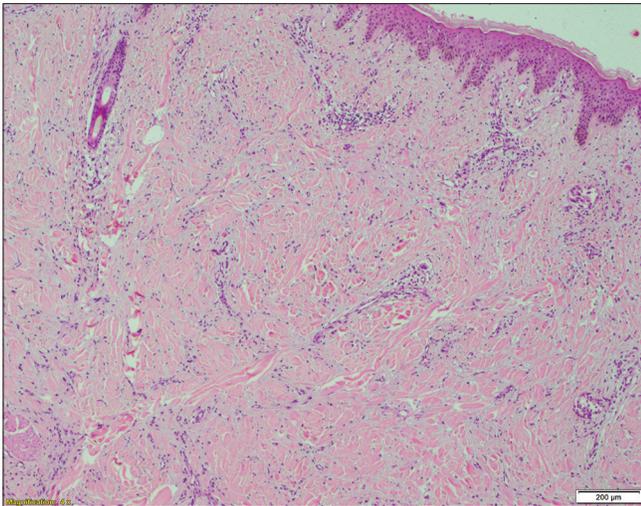


Figure 6a: Patient 2: H and E stained sections show an infiltrate in diffuse pattern in the dermis ($\times 40$)

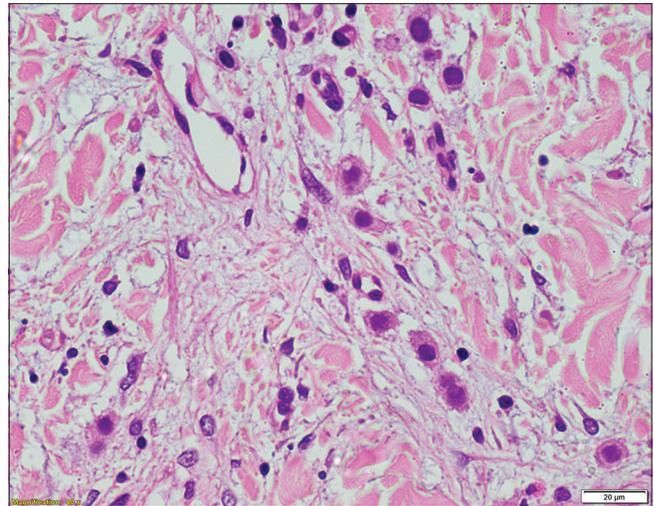


Figure 6b: Higher magnification showing isolated tumor cells with centrally located hyperchromatic nucleolus and moderate amount of eosinophilic cytoplasm (H and E, $\times 400$)



Figure 7: Patient 3: Grouped skin-coloured firm papules and violaceous papules and nodulo-plaques on the right mammary region

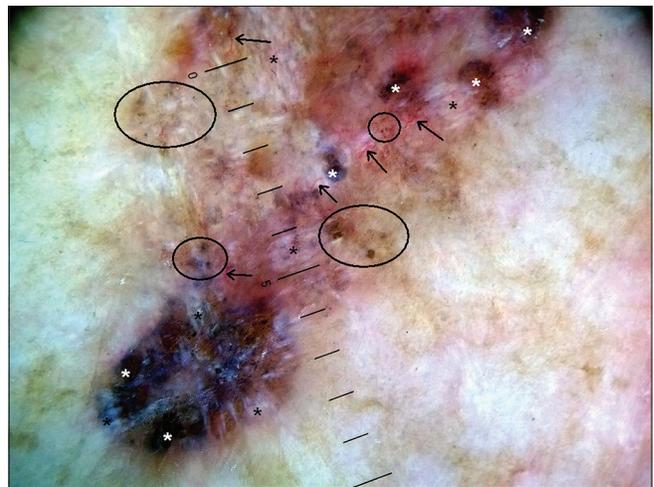


Figure 8a: Patient 3: Dermoscopic examination (polarized, $\times 16$; Heine Delta 20T, Heine Optotechnik, Herrsching, Germany) of the violaceous plaque showing asymmetric blue-black ovoid nests of variable size (white stars), focal clustered gray dots and pigment network (black circles), an erythematous structureless zone with parallel whitish streaks (black stars) and short branched vessels (black arrows)



Figure 8b: Patient 3: Dermoscopic examination (polarized, $\times 16$; Heine Delta 20T, Heine Optotechnik, Herrsching, Germany) of the skin coloured papule showing branching linear vessels (black arrows) on a background of structureless erythematous areas (black stars)

breast carcinoma metastases, showed melanocytic patterns comprising of pigmented streaks ($n = 3$), blue-gray globules ($n = 2$) and a blue-white veil ($n = 1$).¹ Dermoscopy of pigmented cutaneous metastases of breast carcinoma can resemble malignant melanoma or basal cell carcinoma.^{3,4} Vascular pattern such as linear irregular branched or polymorphic vessels was the predominant finding in two other reports of four cases of non-pigmented breast carcinoma cutaneous metastases, suggesting a role of neo-angiogenesis in their pathogenesis. Other findings included yellow central areas, white lines at periphery and surrounding whitish structureless areas. The peau d'orange appearance showed small umbilicated pits with a tendency to form linear fissure-like structures.^{2,5}

Table 1: Clinical, histological and dermoscopic features of cutaneous metastases in the three patients

Patient number	Histological type of breast carcinoma	Clinical morphology of cutaneous breast cancer metastases	Histological pattern of metastases	Dermoscopy findings
1	Invasive ductal carcinoma, no special type	Erythematous indurated plaques Skin coloured translucent papules and vesicles	Sheets of tumour cells in the upper dermis Sheets of tumour cells in the upper dermis, along with lymphovascular invasion	Multiple scattered small round whitish clods, erythematous structureless areas Well-defined yellow-white lacunae separated by septae, adjacent smaller red lacunae
2	Invasive ductal carcinoma, no special type	Ill-defined erythematous plaques Mastectomy scar	Diffuse interstitial infiltrate in dermis Biopsy not done	Short-branched linear vessels focally, background erythematous structureless areas Reddish clods, short curvilinear vessels
3	Invasive ductal carcinoma, no special type	Skin coloured papules Violaceous papules and plaques	Tumour islands in deep dermis Biopsy not done	Branching linear vessels on a background of structureless erythematous areas Asymmetric, blue-black ovoid nests, focal clustered gray dots and pigment network, erythematous structureless zone with parallel whitish streaks and short branched vessels

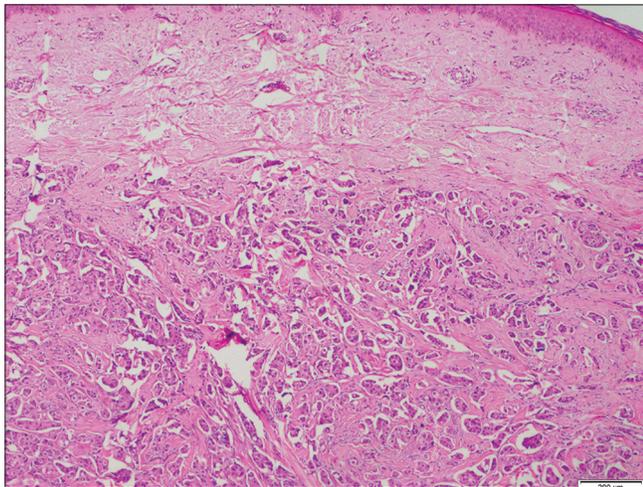


Figure 9a: Patient 3: Tumor involves the primarily deep dermis, and the cells are arranged in small groups (H and E, $\times 400$)

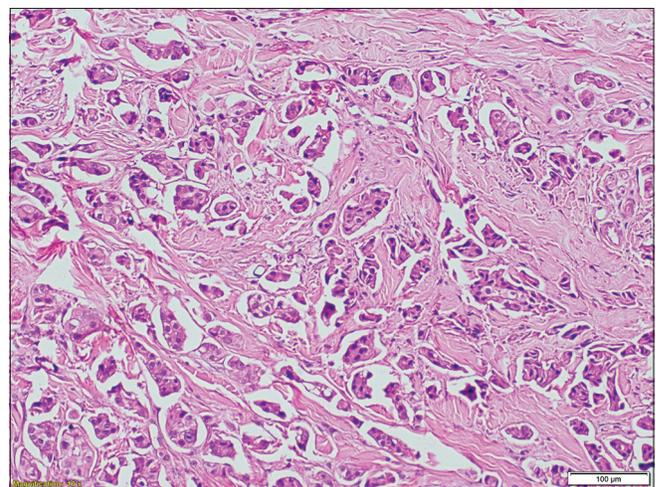


Figure 9b: Higher magnification shows the tumour cells are cuboidal with large hyperchromatic nuclei, prominent eosinophilic nucleoli and high nuclear-cytoplasmic ratio (H and E, $\times 100$)

To the best of our knowledge, dermoscopic features of cutaneous metastases have not been described in dark-skinned population. We report the dermoscopic findings of breast carcinoma cutaneous metastases in three Indian patients with Fitzpatrick skin phototype IV or V. The dermoscopic features noted in our patients are similar to the descriptions in previous reports: vascular patterns (linear branched vessels, short curvilinear vessels, red clods, erythematous structureless areas) in skin-coloured or erythematous lesions, and melanoma-like features (asymmetric blue-black ovoid nests, focal gray dots and pigment network, whitish streaks, telangiectasias) in a pigmented lesion.^{6,7} We also noted yellow-white lacunae and smaller red lacunae separated by thin septae, the dermoscopic features described for lymphangiectasias, probably correlating with the lympho-vascular invasion by tumour cells; these features have not been described for breast carcinoma cutaneous metastases before to our knowledge [Table 1].^{8,9}

The dermoscopic findings of breast carcinoma cutaneous metastases appear to be relatively non-specific, and can resemble benign as well as malignant conditions. However, some dermoscopic features such as linear branched vessels, and features resembling those of melanoma or lymphangiectasias can raise the suspicion of a metastatic deposit in the appropriate setting.

Declaration of patient consent

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Dermoscopic findings of *de novo* syringocystadenoma papilliferum

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Sir,
Syringocystadenoma papilliferum is an uncommon, benign, hamartomatous adnexal tumor arising from pluripotent cells. The histology can exhibit either apocrine or eccrine differentiation. Although commonly associated with other benign adnexal tumours like sebaceous nevus, it can also occur *de novo*.¹

A 7-year-old healthy boy presented with multiple asymptomatic skin-colored, solid elevated lesions on his back since last 4 years. His personal and family history were unremarkable. Cutaneous examination demonstrated multiple, discrete, skin-colored to translucent, firm papules showing mid-back distribution. Most papules bore a central umbilication, while some coalesced to form plaques [Figure 1]. Remaining cutaneous, general and systemic examinations were within normal limits. Dermoscopy under polarized light (Dermlite, DL4, 10× magnification) revealed a pattern comprising of a central crater surrounded by white structureless area and/or shiny white lines and an outer rim of brown structureless area [Figure 2a]. Occasional white rosettes (white dots,

arranged in a square) and dotted vessels [Figure 2b] were identified. We considered syringocystadenoma papilliferum and molluscum contagiosum as differentials. Histopathology revealed hyperkeratosis, papillomatosis and dermal cystic invaginations [Figure 3a] lined by double-layered epithelium- an inner row of columnar cells and outer row of small cuboidal cells [Figure 3b]. We observed multiple luminal papillary projections, and the stroma was infiltrated with lymphocytes, histiocytes, plasma cells and sparse neutrophils. Few columnar cells showed decapitation secretion. The upper dermis showed dense cellular infiltration (lymphocytes > plasma cells), + while lower dermis demonstrated dilated apocrine glands. We made a diagnosis of syringocystadenoma papilliferum and, referred the patient to the department of plastic surgery for complete surgical excision.

Syringocystadenoma papilliferum usually affects infants and children, while adolescents and adults constitute 15–30% cases. The head and neck region is affected most commonly, in about 75% cases. Although benign, a rare transformation to

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