Dermoscopy of Tuberculosis Verrucosa Cutis

Deepak Jakhar, Rakesh K. Gupta, Namrata Sarin[1]

Departments of Dermatology and [1]Pathology, North Delhi Municipal Corporation Medical College and Hindu Rao Hospital, New Delhi, India

A 45-year-old female presented with a single erythematous, scaly plaque (1.5 × 1.0 cm) over the right elbow for the past 5 years [Figure 1a]. There was no itching, pain, or loss of sensation over the plaque. Rest of the mucocutaneous examination was non-contributory. Patient gave history of pulmonary tuberculosis 6 years back and took category-I anti-tuberculosis treatment for 6 months. Based on history and clinical examination, a differential diagnosis of tuberculosis verrucosa cutis (TBVC) and lupus vulgaris (LV) was made. Dermoscopy of the lesion at lower magnification [Dermlite 4Gen; 10×; polarising] showed yellowish to reddish background with papillated surface and dirty white thick scales. Yellowish brown areas were visible at places and vascular structures were inconspicuously seen [Figure 1b]. On higher magnification [Dinolite AM4115ZT; 50×; polarising], irregularly dilated vessels within the individual papillae were seen along with yellow-orange globular and structureless areas [Figure 2a]. Histology from the lesion showed hyperkeratosis, papillomatosis, acanthosis, epithelioid cell granulomas with many Langhan's giant cells [inset of Figure 2b] and mixed inflammatory infiltrate [Figure 2b]. Based on histology, the diagnosis of TBVC was confirmed.

Dermoscopy of cutaneous tuberculosis (CTB), except lupus vulgaris (LV), is a not described thoroughly in English literature.[1] Fine focused telangiectasia on a yellow to orange background are typically described for LV and are correlated with apple jelly sign. However, other forms of CTB are vaguely described. Our case shows the utility of dermoscopy in aiding the diagnosis of TBVC. The dermoscopic features showed good correlation with the histological features of TBVC. White thick scales represent hyperkeratosis, papillated surface represent papillomatosis, yellow-orange globular and structureless areas represent epithelioid cell granulomas with Langhan giant cell. A study has shown increased microvessel count in TBVC as compared to LV.[2] Increased blood vessels results due to cytokine release, reactive oxygen species, and angiogenesis. But due to prominent epidermal changes like hyperkeratosis, acanthosis, and

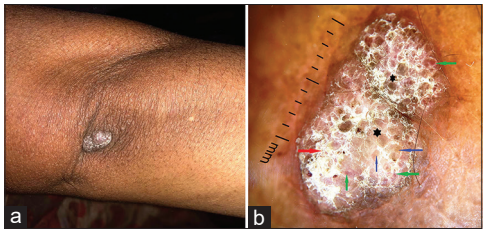

Figure 1: Erythematous scaly plaque over the right elbow (a); Polarisingdermoscopy showing yellowish to reddish background with papillated surface (black star), dirty white thick scales (red arrow), yellowish brown areas (blue arrow) and out of focus vascular structures (green arrow) (b). [Dermlite 4 Gen; 10×; polarising]

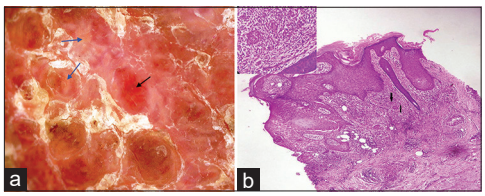

Figure 2: Videodermoscopic image showing irregularly dilated vessels (black arrow), yellow to orange color areas (blue arrow) [Dinolite AM4115ZT; 50×; polarising] (a); histology showing hyperkeratosis, papillomatosis, acanthosis, epithelioid cell granulomas with many Langhan's giant cells (black arrow) & mixed inflammatory infiltrate (b) [H&E; 10×]. The inset showing epithelioid cell granuloma and Langhan's giant cell [H&E; 40×]

Address for correspondence:
Dr. Deepak Jakhar, Department of Dermatology, North Delhi Municipal Corporation Medical College and Hindu Rao Hospital, New Delhi - 110 007, India. E-mail: dr.deepakjakhar@yahoo.in

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papillomatosis, the visibility of this vasculature is masked in TBVC and they appear as out of focus vascular structures. In LV, due to relatively lesser epidermal changes as compared to TBVC, telegiectasia are visible on dermoscopy in addition to apple jelly sign. Dermoscopic differentiation from chromoblastomycosis and viral warts also becomes essential in such cases. Dermoscopy of chromoblastomycosis shows yellow orange ovoid structures over a pink and white areas along with scales and crusts; and scattered red-black dots.[3] Warts with dermoscopic mosaic pattern shows flat to rounded structures and/or exophytic projection (corresponding to church-spire papillomatosis) with dotted, linear, or hairpin vessels within the rounded structures/exophytic projections; white circle to yellow surface keratosis (corresponding to hyperkeratosis, parakeratosis, and acanthosis) and black dots (corresponding to thrombosed vessels and epidermal hemorrhages).[4]

Declaration of patient consent

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

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Conflicts of interest

There are no conflicts of interest.

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