

## Generalised Trichostasis spinulosa - A report of two cases

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### ABSTRACT

Trichostasis spinulosa (TS) is a commonly encountered but often overlooked disorder of the pilosebaceous unit, characterised by hyperkeratosis of dilated hair follicle with retention of telogen hairs in a keratinous sheath. It is commonly observed as multiple asymptomatic black dots over distal part of the nose. Other sites reported previously include vertex, interscapular region, neck, chest etc. It closely resembles keratosis pilaris, open comedones and eruptive vellus hair cyst. Here, we report 2 cases of generalised trichostasis spinulosa - a rare entity which we diagnosed clinically and confirmed by dermoscopy and histopathology. We would like to highlight the importance of dermoscopy, a simple, non-invasive, economical bedside tool in diagnosing skin diseases.

Key-words: Trichostasis spinulosa, dermoscopy, generalised.

### Introduction :

Trichostasis Spinulosa (TS) is a very common disorder of the hair follicle in which there is tuft of hairs in a dilated follicle surrounded by keratinous sheath. Although it is common on the face, reports with extensive involvement are sparse. There are two common variants- classical and pruritic. We came across two cases of pruritic variants. Dermoscopy helped in better visualization of vellus hairs erupting from single dilated follicle preventing the need for biopsy. Thus a strong suspicion should be made when patient presents with hyper pigmented spiny keratotic papules all over body ruling out other causes of follicular hyperkeratosis with the help of dermoscope.

### Case Report :

A 20 year old male presented with multiple tiny dark coloured elevated lesions which appeared first over the bilateral upper limb and gradually spread to involve trunk, buttock, abdomen and bilateral lower limbs over the period of 5 years. Lesions were occasionally pruritic. There was no history of similar lesions in other family members. His past medical history was unremarkable. On clinical

examination multiple hyperkeratotic follicular papules were present predominantly involving the trunk, back, bilateral upper and lower extremity (**Figure 1**). Based on history and clinical findings we kept the differential diagnosis of keratosis pilaris, eruptive vellus hair cyst and generalised trichostasis spinulosa. Dermoscopy from the lesions over back revealed tuft of vellus hairs emerging from single dilated follicular opening (**Figure 2**). Further, skin biopsy with H and E staining revealed mild acanthosis, dilatation of single hair follicle with retention of small vellus hair shaft surrounded by keratinous material within upper dermis area with perifollicular infiltrate of mononuclear cells (**Figure 3 a, b**). Thus, based on history, clinical examination, dermoscopy and skin biopsy we reached the final diagnosis of generalised trichostasis spinulosa.

Our second case was 27 years old male who presented with multiple asymptomatic small raised lesions all over body since 3 years. On cutaneous examination multiple hyper pigmented follicular papules were present symmetrically over upper and lower extremity, trunk and back (**Figure 4**). On dermoscopy findings were consistent with the diagnosis of trichostasis spinulosa with similar tuft of lightly pigmented vellus hairs coming out from one dilated follicular opening as noted in previous patient (**Figure 5**). However patient refused for skin biopsy. Both the patients were started on oral isotretinoin (0.5mg / kg body weight) along with emollients; they showed mild clinical improvement.

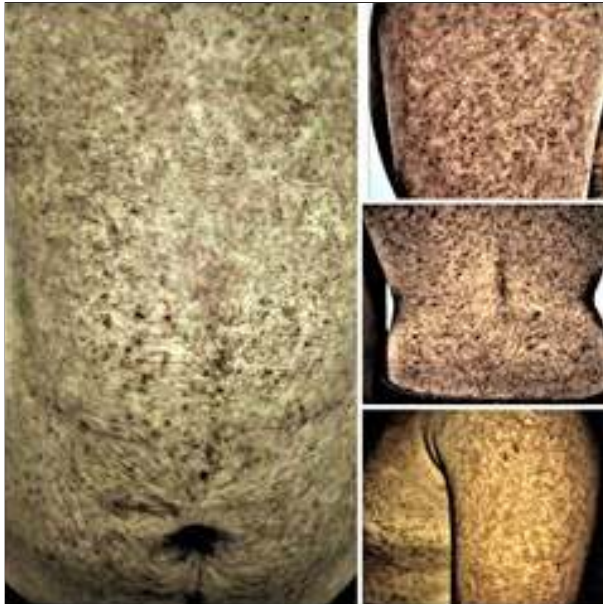
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**Figure 1 :** Multiple hyperkeratotic follicular papules over chest, back, and arms



**Figure 4 :** Numerous spiny papules over chest, back and lower limbs



**Figure 2 :** Dermoscopy from back lesion showing multiple hair follicles emerging from single follicular opening (non polarised with X20 magnification)



**Figure 3 :** (a) Scanner view, showing mild acathosis with single hair follicle in upper dermis (H and E, X4). (b) Three vellus hair shafts within one dilated follicle surrounded by keratinous sheath and mononuclear inflammatory infiltrate (H & E, X40) in a keratinous plug



**Figure 5 :** Dermoscopy revealed tuft of vellus hairs erupting from dilated follicle (non polarised with X20 magnification)

#### **Discussion :**

TS is a common but under reported disorder of the hair follicle characterized by hyperkeratosis of the dilated follicle with retention of multiple telogenvellus hairs. First recognised by German dermatologist Felix Franke in 1901 who named it “Pinselhaar” (paintbrush hair). The term

“trichostasis spinulosa” was introduced in 1913 by Noble.<sup>1</sup> The exact aetiology is still unknown. Various proposed causes are congenital dysplasia of the hair follicles, exposure to heat, ultraviolet radiations, oils, dust and industrial irritants.<sup>2</sup> Presence of *Pityrosporum ovale* (82.6%) and *Propionibacterium* (33.3%) in the follicular material and biopsy samples from patients of TS suggest that these commensal organisms may be the possible etiologic factors.<sup>3</sup> Both the sexes are affected equally.<sup>2</sup> There are two types of TS. The classical one presents with solitary, non-pruritic lesion of the face resembling open comedones in the elderly. Pruritic type presents as multiple follicular spiny papules mainly located on extremities and trunk in young adult.<sup>1</sup> There is lack of awareness about this variant due to its generalised involvement as occurred in our patients and may lead to wrong diagnosis of keratosis pilaris, comedonal acne and eruptive vellus hair cyst. Both invasive and non-invasive modalities are available to diagnose this condition. Dermoscopy is among the non-invasive methods which shows tuft of short, vellus hairs emerging from the same follicular opening along with keratotic plugs.<sup>4</sup> Invasive test such as skin biopsy shows dilated follicular infundibulum with numerous pigmented vellus hairs within it surrounded by keratinous sheath. Perifollicular infiltrate of mononuclear cells also noted.<sup>4</sup> Treatment of TS is often distressing as it runs a chronic course and mostly non curative. The various options tried in the past are local application of 0.04%, 0.10% tretinoin gel, hydro active adhesive

pads, keratolytics and wax depilatory.<sup>5</sup> But relapses are common on discontinuation of treatment. 800 nm pulse-diode laser and 755 nm alexandrite laser have been found to be effective in one study.<sup>6,7</sup> There are very few options to treat generalized TS. Considering TS as a disorder of follicular keratinization we started our patients on isotretinoin 0.5 mg/kg body weight & they are under follow up. Thus, it can be concluded that high index of suspicion to the pruritic variant can lead to the diagnosis of many cases of generalised TS which can be easily picked up with the help of dermoscope. Also, we suggest routine use of dermoscope in OPD to diagnose and differentiate between similar looking conditions as it is easily available, time saving and patient favourable.

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