

## Brown Plaque with Ripple Pattern on Nasolabial Fold



A 12-year-old boy presented with a 6-month history of asymptomatic brown plaques on his nasolabial fold that had not disappeared despite repetitive cleansing with soap and water. Physical examination showed a ripple pattern area of brown plaque with well-defined borders on his nasolabial fold (Figure 1). No other body part was involved and there were no systemic symptoms. A punch biopsy taken from his nasolabial fold showed papillomatosis of the epidermis associated with irregular acanthosis and prominent lamellar hyperkeratosis with intracorneal orthokeratotic whorls. Numerous yeast forms were present in the stratum corneum. The diagnosis of Terra firma-forme dermatosis (TFFD) was made. The lesion was completely removed by hard scrubbing with a 70% alcohol swab (Figure 2).

TFFD, also known as Duncan's dirty dermatosis, is an idiopathic condition with an unknown etiology. Abnormal and delayed maturation of keratinocytes with melanin retention within the epidermis, and a sustained accumulation of the residues of sweat, scales, sebum, emollients, bath oils, and soaps are considered to contribute to its pathogenesis.<sup>1</sup> No familial characteristic has been reported. TFFD can affect all age group (4 months-72 years) and both sexes.<sup>2</sup> Most cases were reported in prepubertal children and adolescents with normal hygiene habits and occurred during the warm period of the year. Some patients have experienced intense sun exposure during the summer before the eruption.<sup>3</sup> Clinically, TFFD is characterized by asymptomatic hyperpigmented patches or plaques resembling dirt on face, neck, trunk, and ankles. Verrucous, reticulated, and stuck-on lesions could also be found.<sup>4</sup> The distribution may be localized, generalized, symmetrical, or unsymmetrical.

TFFD is easily confused with dermatosis neglecta. Normal washing with soap and water can remove the pigmentation of dermatosis neglecta, whereas the lesions associated with TFFD are resistant to usual hygiene measures. Other differential diagnoses include chronic eczema, tinea versicolor, confluent and reticulated papillomatosis, and acanthosis nigricans.

Typical TFFD cases rarely require biopsy, but histopathologic findings may aid in the diagnosis of challenging cases. Because our patient presented with a rare condition of a ripple pattern lesion, we performed a biopsy with approval from the parents. Characteristic histology of TFFD demonstrates prominent lamellar hyperkeratosis with focal orthokeratotic whorls, epidermal acanthosis,



**Figure 1.** Physical examination showed a ripple pattern area of brown plaque on the nasolabial fold.



**Figure 2.** The lesion was completely removed by hard scrubbing with a 70% alcohol swab.

and papillomatosis.<sup>3</sup> Numerous yeast forms representing *Malassezia* organisms may be present throughout the stratum corneum.

The rapid removal method by 70% ethyl or isopropyl alcohol swabbing is both diagnostic and therapeutic for TFFD. Salicylic acid-based exfoliants or other keratolytic agents may accelerate the normalization of the skin and treat the condition. Recurrence is rare after the treatment.

Repeated application of isopropyl alcohol superficial peeling once a week can be used for resistant or recurrent cases.<sup>5</sup> ■

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## References

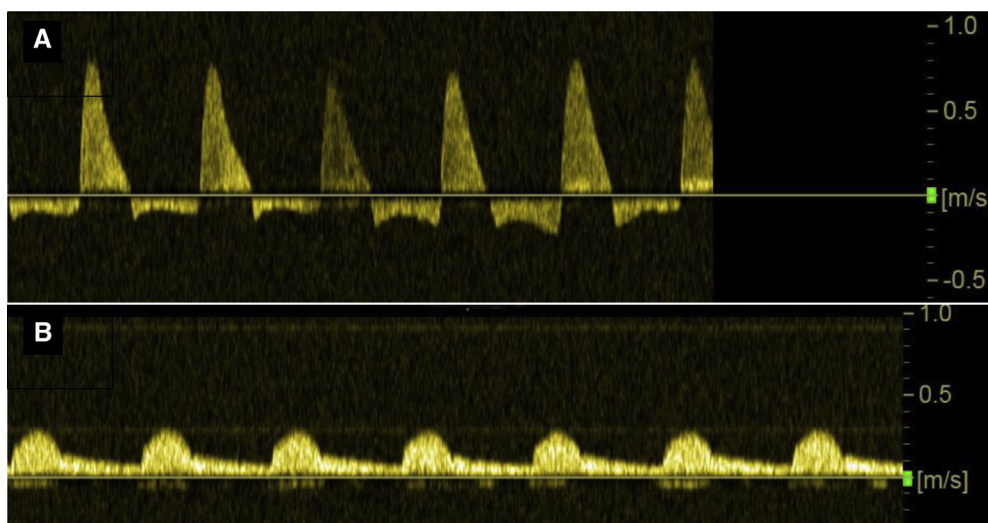
1. Solak B, Erdem T. Terra firma-forme dermatosis: wipe first. *Int J Dermatol* 2015;54:e548-9.
2. Ashique KT, Kaliyadan F, Goyal T. Terra firma-forme dermatosis: report of a series of 11 cases and a brief review of the literature. *Int J Dermatol* 2016;55:769-74.
3. Pavlović MD, Dragos V, Potocnik M, Adamic M. Terra firma-forme dermatosis in a child. *Acta Dermatovenerol Alp Panonica Adriat* 2008;17:41-2.
4. Fernández-Crehuet P, Ruiz-Villaverde R. Terra firma-forme dermatosis. *CMAJ* 2016;188:285.
5. Erkek E, Sahin S, Çetin ED, Sezer E. Terra Firma-forme dermatosis. *Indian J Dermatol Venereol Leprol* 2012;78:358-60.

## Renal Arterial Doppler Perfusion Pattern with and without Ductal Steal



Acute kidney injury is a known phenomenon in premature infants with hemodynamically significant patent ductus arteriosus (PDA). Ductal steal may result in widened pulse pressure, bounding pulses, pulmonary overflow, and organ injury with decreased blood flow to brain, intestines, or kidney. Assessing for vascular steal at the bedside includes obtaining Doppler arterial flow patterns in various organs, including the kidney. The pattern of decreased flow and organ(s) affected in symptomatic PDA may be variable. Attention to clinical status such as feeding intolerance or

decreased urinary output pointing at the potential organ affected is prudent. Worsening Doppler flow over time shows steepening systolic increase in artery pressure, and absent, then reverse end-diastolic, and finally reversed flow throughout diastole in symptomatic PDA (Figure, A). This might result in acute kidney injury such as that we observed in a 3-week-old extremely preterm infant of 24 weeks of gestation and 560 g birth weight, characterized by doubling of baseline creatinine and reduced urinary output. After successful complete closure of the PDA, the flow pattern



**Figure.** Doppler perfusion pattern of the right renal artery. **A**, With significant ductal steal, retrograde diastolic flow, steep systolic rise, and elevated systolic pressure. **B**, Normalized 3 days later after ductal closure with preserved diastolic flow and low velocity.