

## SHORT COMMUNICATIONS – IN REPLY

### REPLY: “Terra Firma-Forme Dermatitis, Keratotic Form”

Daniel J. Callaghan III, MD<sup>1</sup>, Kenneth A. Arndt, MD<sup>1</sup>

<sup>1</sup>SkinCare Physicians, Chestnut Hill, MA

#### TO THE EDITORS

Abdalla and colleagues presented an interesting case of a hyperkeratotic variant of Terra Firma-Forme Dermatitis (Duncan’s dirty dermatosis) which was not responsive to alcohol pads.<sup>1</sup> The authors are correct in stating that isopropyl alcohol has traditionally been described as being both diagnostic and therapeutic for terra firma-forme dermatosis. This has even been termed the SMART (Skin Modified by Alcohol Rubbing Test) evaluation,<sup>2</sup> and an extensive review of the literature including over 50 cases reinforce the value of alcohol for this condition.<sup>3-6</sup> We present an additional case and offer an alternative treatment that may be of value in the rare instances where alcohol is not sufficient.

The patient was a 27 year-old female who presented with a 1 month history of hyperpigmented macules and thin papules on her bilateral cheeks (Figure 1). Although a diagnosis of terra firma-forme dermatosis was favored, it was not a clear-cut diagnosis. A 70% isopropyl alcohol pad was rubbed vigorously on her cheek until she endorsed discomfort, which caused us to stop with no resolution of the lesions. At this point we questioned our leading diagnosis as it had failed the alcohol rubbing test. In past cases we had successfully removed tightly adherent material from the skin in

similar cases resistant to alcohol with acetone, a potent solvent, and when acetone was rubbed on the skin the debris was removed with ease, confirming the diagnosis.

Solvents are compounds that are used to dissolve, suspend or extract other materials. The term ‘solvent’ comes from the Latin root *sol/v*, which means “loosen”. Isopropyl alcohol is a non-polar solvent which means it can dissolve other non-polar, organic substances. However, acetone is more non-polar than isopropanol, is a more potent solvent and therefore may do a better job at dissolving the keratin and sebum found in these lesions.

Given the hyperkeratotic nature of the lesions in the reported patient, it is entirely possible a more potent solvent may have been effective in removing the hyperkeratosis thus avoiding manual debridement.



Figure 1.

November 2019 Volume 3 Issue 6

**Conflict of Interest Disclosures:** None

**Funding:** None

**Corresponding Author:**

Daniel J. Callaghan III, MD  
SkinCare Physicians  
1244 Boylston Street, Suite 103  
Chestnut Hill, MA 02467  
Tel: (641) 583-5212  
Email: [DanielJCallaghan3@gmail.com](mailto:DanielJCallaghan3@gmail.com)

---

**References:**

1. Abdalla J, Cruse A, Patel N, Brodell R. "Terra Firma-Forme Dermatitis, Keratotic Form." SKIN The Journal of Cutaneous Medicine [Online], 3.3 (2019): 212-214. Web. 22 May. 2019
2. Greywal T, Cohen PR. Non-invasive methods to establish the diagnosis of terra firma-forme dermatosis: The SMART (Skin Modified by Alcohol Rubbing Test) evaluation and dermoscopy. *Dermatol Online J.* 2016 Jun 15;22(6). pii: 13030/qt7jk6k6d9.
3. Greywal T, Cohen PR. Terra firma-forme dermatosis: A report of ten individuals with Duncan's dirty dermatosis and literature review. *Dermatol Pract Concept.* 2015 Jul 31;5(3):29-33. doi: 10.5826/dpc.0503a08. eCollection 2015 Jul.
4. Berk DR. Terra firma-forme dermatosis: a retrospective review of 31 patients. *Pediatr Dermatol.* 2012 May-Jun;29(3):297-300. doi: 10.1111/j.1525-1470.2011.01422.x. Epub 2011 Oct 4.
5. Abdel-Razek MM, Fathy H. Terra firma-forme dermatosis: Terra Firme-Forme Dermatitis Diagnostic Sign and Treatment: A Case Report.. *Dermatol Online J.* 2015 Oct 16;21(10). pii: 13030/qt4rq5x48c.
6. Browning J, Rosen T. Terra firma-forme dermatosis revisited. *Dermatol Online J.* 2005 Aug 1;11(2):15.