Management of Pitted Keratolysis-A Rare Dermatological Condition

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Pitted keratolysis, a skin condition that damages the stratum corneum of the arch of the foot, is caused by gram positive bacteria. Responsible agents include Dermatophiluscongolensis, Corynebacterium sp., and Micrococcus sedentarius. These microbes all cause the epithelial tissue to develop tiny burrows [1]. Erythrasma, trichomycosisaxillaris, and pitted keratolysis each have been documented as concomitant corynebacterial illnesses, indicating that corynebacterium is a significant causative factor in all three conditions [2]. As per Ayurvedic texts, *kustha* illness refers to all skin conditions. Pitted keratolysis is a form of *kustha* disorder and can be categorised as *Vipadika*. It is successfully managed through adequate foot hygiene, antibiotic ointments, and bactericidals.

This manuscript presents a 50-year-old male military employee, who visited the Outpatient Department (OPD) of the Department of Kayachiktsa with chief complaints of small punched-out lesions and itching on the plantar surface of bilateral feet for 2-3 months. The patient suffered from severe itching on sole of bilateral feet and having mild pain at the sole region while walking, which was associated with gradual peeling of the surface of skin. No such lesions were there elsewhere in the body. There was no relevant family history of the patient. There was no any significant medical history of hypertension or diabetes mellitus or any other allergic illness. On physical examination, small punch out lesions on the plantar surface of bilateral feet were observed.

As in [Table/Fig-1], pitted keratolysis was diagnosed from the clinical appearance. Palmoplantar keratoderma, keratoderma, punctate palmoplantar, palmoplantar hypokeratoses, and verucae, are among the primary differential diagnoses [3].



[Table/Fig-1]: Pitted Keratolysis in bilateral feet (before treatment).

In this case, for one month, the medicinal cleansing therapy and the ayurvedic palliative care were administered. *Dhavan* (proper wash) with *Triphala patra kwath* and *Nimba patra kwath* twice a day was advised as the medicinal cleansing therapy and *Sarivadyasav*

Keywords: Gram positive bacteria, Stratum corneum, Vipadika

in a dosage of 20 mL twice a day after meals with equal quantity of water, *Mahatikta Ghrita* in the dosage of 10 mL in the morning on empty stomach with lukewarm water was administered to the patient. For the preventive measure, proper maintenance of hygiene, always keeping the feet dry and altering socks and shoes frequently, along with rotating or letting out shoes was strictly advised to the patient.

Triphala and *Nimba* possess antimicrobial action and so proper wash of bilateral feet with their decoction yields good results. *Sarivadyasav* is considered to be having *Rakta shodhak* action, which means, it helps in purifying the impure blood. *Mahatikta Ghrita* is described as *Kushtaghna* and helps in treating many kinds of skin diseases [4]. After the completion of the treatment, it was found that the punched out lesions associated with itching in bilateral feet healed significantly.

Following a one month follow-up, significant recovery was seen. A good prognosis was seen and the lesions healed within three to four weeks [Table/Fig-2].



[Table/Fig-2]: Follow-up image (after treatment)

Acknowledgement

I acknowledge Dr. Vaishali Kuchewar and Dr. Twinkle Joshi for their valuable contribution in this manuscript.

REFERENCES

- de Almeida HL, Jr, de Castro LA, Rocha NE, Abrantes VL. Ultraestructure of pitted keratolysis. International Journal of Dermatology. 2000;39(9):698-701.
- [2] Steiner D, Cucé LC, Salebian A. Eritrasma interpododigital. Anais Brasileiros deDermatologia. 1994;69(1):16-20. Available at: http://www.anaisdedermatologia. com.br/detalhe-artigo/1132/Eritrasma-interpododigital.

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- [3] Vlahovic TC, Dunn SP, Kemp K. The use of a clindamycin 1%-benzoyl peroxide 5% topical gel in the treatment of pitted keratolysis: A novel therapy. Advances in Skin & Wound Care. 2009;22(12): 564-66.
- [4] Charaka Samhita by Agnivesha, Revised by Charaka and Dridhabala 'Vidyotini' Hindi commentary by Prof. Kashinath Shastri and Dr. Gorakhnath Chaturvedi, Sutra sthana Part I (Reprint year 2012) Chaukhamba Bharati Academy, Varanasi; 2002.

PLAGIARISM CHECKING METHODS: [Jain H et al.]

• Plagiarism X-checker: Dec 03, 2022

• iThenticate Software: Dec 23, 2022 (2%)

Manual Googling: Dec 17, 2022

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AUTHOR DECLARATION:

- Financial or Other Competing Interests: None
- Was informed consent obtained from the subjects involved in the study? Yes • For any images presented appropriate consent has been obtained from the subjects. Yes

- Date of Submission: Nov 23, 2022 Date of Peer Review: Dec 05, 2022 Date of Acceptance: Dec 26, 2022 Date of Publishing: Feb 01, 2023

ETYMOLOGY: Author Origin

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