



MEDICAL THERAPIES AND PHARMACOLOGY

## TOPICAL PROLINE THERAPY IN PROLIDASE DEFICIENCY

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**Background:** We report a unique case of Prolidase deficiency in a patient with recurrent chronic cutaneous ulcers over bilateral lower legs who was successfully treated with topical proline application under occlusion. Topical proline is a cheap and effective treatment for cutaneous ulcers in Prolidase deficiency.

**Observation:** A 44 year old housewife presented to our dermatology out patient department with complaints of chronic non-healing painful ulcers over both the lower legs and feet since childhood. The ulcers were recurrent in nature and partially resolved with topical medication. She has five siblings none of them have similar complaints. Patient also gave history of recurrent ear discharge from left ear for two years. On examination multiple well defined ulcers of size ranging from 1cm to 2cm with sloping edges and yellowish crusting were present on the anterior and posterior aspect of right leg and dorsal aspect of both the feet. Patient had dysmorphic facies in the form of hypertelorism, low set ears, and swelling of lip. Based on the clinical features and investigations, possibility of prolidase deficiency was considered. It was confirmed by sequence analysis of the 15 exons of PEPD gene by direct gene amplification and sequencing of the genomic DNA obtained from blood. And it showed homozygous deletion of 'c' nucleotide at 'position7' of exon 12 in the subject. The patient was started on topical L proline treatment. L-proline lotion (5% proline in liquid paraffin base) was applied under occlusion daily. The ulcer showed remarkable improvement by one week. Three weeks later, the ulcers were completely resolved.

**Key message:** As in our case proline can be used as an effective topical medication for chronic recurrent ulcers in prolidase deficiency.

