

Transepidermal elimination: Role in leprosy transmission

Sir,

I read with interest the Residents' Page article by Shah *et al.* on transepidermal elimination.¹ Though transepidermal elimination in leprosy was mentioned only once, I would like to make a few comments about the significance of this phenomenon in histoid (and lepromatous) leprosy.¹

Nasal discharge from the untreated leprosy patient is considered the usual source of infection in the community and the cutaneous route is said to be unimportant. In tuberculoid leprosy, *Mycobacterium leprae* resides largely within the skin and the nerve and these patients are never considered infectious.

However, a number of workers have reported the presence of acid-fast bacilli in the epidermis.²⁻⁵ Namisato *et al.* proposed transepidermal elimination as a mechanism for a "mass transport" of live leprosy bacilli in an untreated 35-year-old male lepromatous patient.⁶ The umbilicated/molluscoid lesion is one of the rarest morphological types of histoid leprosy. The fact that type 2 (pseudoisomorphic) Kœbner's phenomenon has been reported in this form of histoid leprosy further substantiates the fact that viable bacilli must be eliminated transepidermally for this to occur clinically.⁷ Therefore, the skin may definitely be a portal for leprosy transmission, at least in the multibacillary cases. Studies are required to explore the contribution of cutaneous carriage and role of epidermal elimination of the bacilli in leprosy transmission. The need is acute as the multibacillary histoid and lepromatous cases are definitely a dreaded challenge to the elimination of this chronic mutilating disease.^{8,9}

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Conflicts of interest

There are no conflicts of interest.

Naveen Kumar Kansal

Department of Dermatology and Venereology, All India Institute of Medical Sciences, Rishikesh, Uttarakhand, India

Correspondence: Dr. Naveen Kumar Kansal,
Department of Dermatology and Venereology, All India Institute
of Medical Sciences, Rishikesh - 249 203, Uttarakhand, India.
E-mail: kansalnaveen@gmail.com

References

1. Shah H, Tiwary AK, Kumar P. Transepidermal elimination: Historical evolution, pathogenesis and nosology. *Indian J Dermatol Venereol Leprol* 2018;84:753-7.
2. Okada S, Komura J, Nishiura M. *Mycobacterium leprae* found in epidermal cells by electron microscopy. *Int J Lepr Other Mycobact Dis* 1978;46:30-4.
3. Ghorpade AK. Transepidermal elimination of *Mycobacterium leprae* in histoid leprosy: A case report suggesting possible participation of skin in leprosy transmission. *Indian J Dermatol Venereol Leprol* 2011;77:59-61.
4. Chander R, Jabeen M, Malik M. Molluscum contagiosum-like lesions in histoid leprosy in a 10-year-old Indian boy. *Pediatr Dermatol* 2013;30:e261-2.
5. Job CK, Jayakumar J, Kearney M, Gillis TP. Transmission of leprosy: A study of skin and nasal secretions of household contacts of leprosy patients using PCR. *Am J Trop Med Hyg* 2008;78:518-21.
6. Namisato M, Kakuta M, Kawatsu K, Obara A, Izumi S, Ogawa H. Transepidermal elimination of lepromatous granuloma: A mechanism for mass transport of viable bacilli. *Lepr Rev* 1997;68:167-72.
7. Ghorpade A. Molluscoid skin lesions in histoid leprosy with pseudo-isomorphic Kœbner phenomenon. *Int J Dermatol* 2008;47:1278-80.
8. Sales AM, Ponce de Leon A, Düppre NC, Hacker MA, Nery JA, Sarno EN, *et al.* Leprosy among patient contacts: A multilevel study of

risk factors. PLoS Negl Trop Dis 2011;5:e1013.

9. Palit A, Inamadar AC. Histoid leprosy as reservoir of the disease; a challenge to leprosy elimination. Lepr Rev 2007;78:47-9.

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