Treatment of nodular scabies with topical tacrolimus

Asit Mittal, Anubhav Garg, Nidheesh Agarwal, Lalit Gupta, Ashok K. Khare

Department of Dermatology, RNT Medical College, Udaipur, Rajasthan, India

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Address for correspondence:
Dr. Asit Mittal,
House No 2,
Road No. 62, Ashok Nagar, Udaipur,
Rajasthan, India.
E-mail:
asitmittal62@gmail.com

Nodular scabies (NS) is a well-known clinical presentation of scabies. It presents as pruritic, persistent nodules for months even after specific treatment of scabies.[1] It probably represents the hypersensitivity reaction to retained mite parts or antigens. Genital skin and scrotal skin are the commonest sites for such lesions. The treatment for these scabietic nodules can be a challenge; they are usually treated with topical steroids or with intralesional steroids but the response is less than satisfactory and relapses are frequent, also long-term use of topical corticosteroid over genital skin can lead to significant cutaneous side effects. Tacrolimus is a calcineurin inhibitor. It binds to the FK506-binding protein leading to the inhibition of calcineurin and prevention of activation of NFAT (Nuclear Factor of Activated T cells). This blocks transcription of the gene encoding IL-2 and blocks T-cell activation and further cytokine production. Also tacrolimus inhibits the release of histamine from mast cells and basophils.[2] These actions may reduce pruritus. Various reports have shown the efficacy of tacrolimus in number of inflammatory cutaneous disorders such as psoriasis, vitiligo, oral erosive lichen planus, morphea, circinate balanitis, and seborrheic dermatitis.[2] NS often shows pseudolymphoma like histopathology with predominant T lymphocytes.[1] Pimecrolimus, another calcineurin inhibitor, has already been shown to be of benefit in NS.[3] This led us to try topical tacrolimus as a therapeutic option in NS. Ten patients of NS were chosen. All had been adequately treated for scabies with topical permethrin and were left with persistent itchy nodular lesions on scrotal and genital skin [Figures 1 and 2]. Patients were asked to apply tacrolimus 0.03% ointment twice daily over the nodular lesions for 2 weeks. No other form of topical or systemic therapy was allowed. They were followed at weekly interval. Complete disappearance of nodular lesions with significant reduction in itching was noticed in almost all cases after 2 weeks [Figures 3 and 4]. After stopping treatment, there was recurrence of lesions in almost all patients but the lesions were smaller in size and itching was much less. A repeat course of topical tacrolimus was given

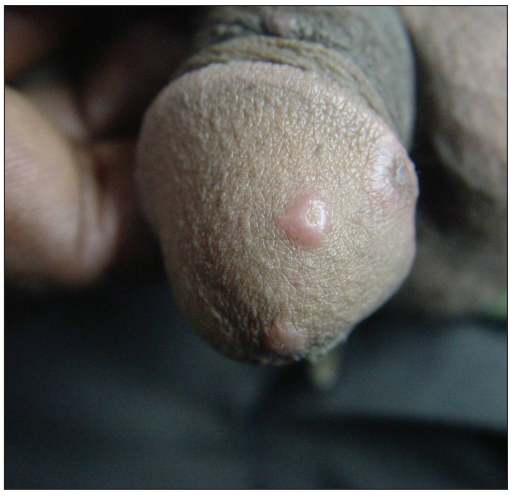

Figure 1: Scabietic nodules on glans

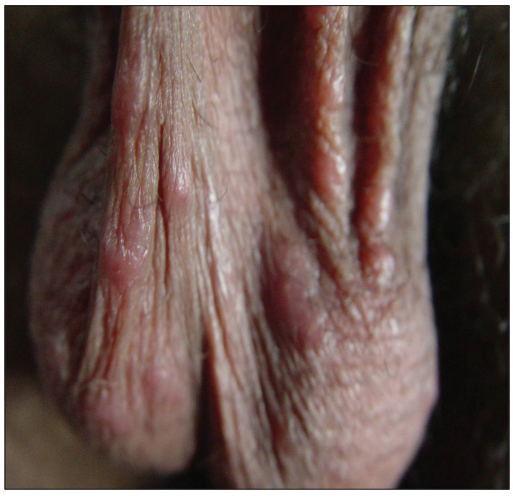

Figure 2: Scabietic nodules on scrotum

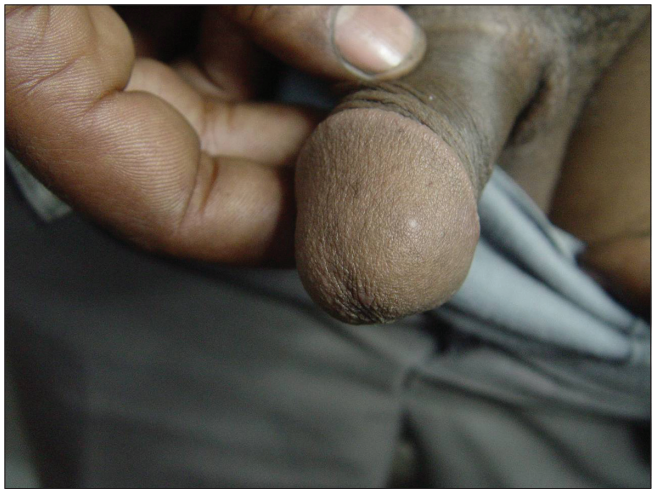

Figure 3: After treatment with tacrolimus

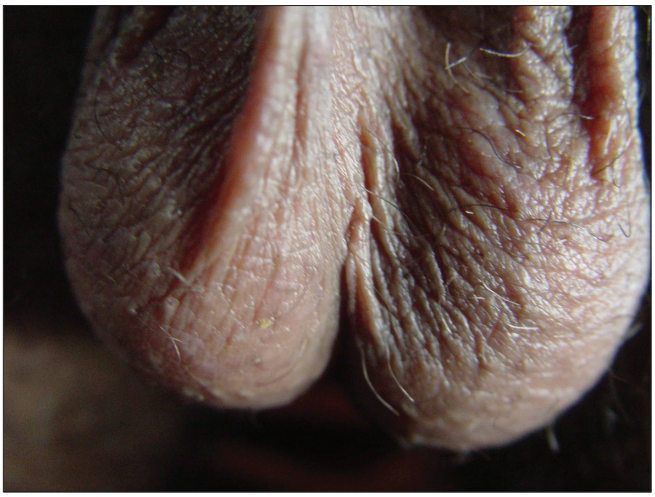

Figure 4: After treatment with tacrolimus

for 1 week and lesions disappeared again. No further follow-up was done. Except mild burning reported by few patients, topical tacrolimus was tolerated well.

Scabietic nodules can be a real nuisance for the practitioners. Results obtained here suggest that topical tacrolimus can be a useful option in their effective management.

REFERENCES

1. Kerl H, Ackerman AB. Inflammatory diseases that simulate lymphomas: Cutaneous pseuolymphomas. In: Fitzpatricks TB, Eisen AZ, Wolff K, Freedberg IM, Austen KF, editors. Dermatology in General Medicine. 4th ed. New York: McGraw-Hill Inc.; 1993. p. 1322-3.
2. Lin AN. Topical calcineurin inhibitors. In: Wolverton SE, editor. Comprehensive Dermatologic Drug Therapy. 2nd ed. China: Saunders Elsevier; 2007. p. 671-89.
3. Almeida HL Jr. Treatment of steroid-resistant nodular scabies with topical pimecrolimus. J Am Acad Dermatol 2005;53:357-8.

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