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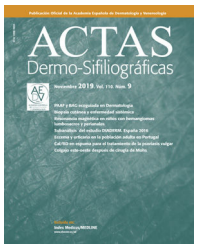

RESIDENT'S FORUM

[Translated article] RF – Resistance to Permethrin in Scabies Treatment: Does It Really Exist?

FR – ¿Existe una resistencia real al tratamiento de la escabiosis con permetrina?

J.P. Velasco-Amador, A. Prados-Carmona, R. Ruiz-Villaverde*

Servicio de Dermatología, Hospital Universitario San Cecilio, Inst. Invest. Biosanitaria IBS Granada, Granada, Spain

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Scabies is a highly contagious skin infestation caused by the *Sarcoptes scabiei* mite. It is generally transmitted through direct, prolonged, skin-to-skin contact, and its incidence increased following the COVID-19 pandemic and home confinement measures.[1] The first-line treatment for scabies is 5% topical permethrin cream, which is applied from head to toe and washed off after 8 to 12 hours. This treatment is repeated after 7 to 14 days. Cure rates of up to 98% have been described for this regimen,[1] but recent months have seen an increase in unsatisfactory responses to treatment.

Treatment failure has generally been attributed to various causes, including incorrect application of the cream, failure to simultaneously treat coinhabitants, and insufficient disinfection of the environment. An increasing number of dermatologists, however, after ruling out the above errors and achieving cure with other topical treatments, such as sulfur-containing petroleum jelly and sodium benzoate, are suggesting that *S. scabiei* may be developing true resistance to permethrin.

In 2018, Sunderkötter et al.[2] warned of an increase in scabies cases in Germany. Among the possible causes they mentioned was permethrin resistance, as patients did not respond as quickly as they had done in previous years. In 2020, Meyersburg et al.[3] described reduced scabies mite susceptibility to permethrin in Austria and called for evaluation of alternative treatment options. In 2021, several Italian working groups also recorded a loss of effectiveness for permethrin. They reported that almost two-thirds of patients in whom the drug had failed responded to another topical treatment, suggesting specific

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* Corresponding author.
E-mail address: ismenios@hotmail.com (R. Ruiz-Villaverde).

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resistance to permethrin; they also excluded lack of compliance as the reason for this lower response.[4] The different mechanisms proposed for resistance to permethrin among *S. scabiei* mites include increased glutathione-S-transferase activity, increased expression of ATP-dependent transporters (e.g., multidrug-resistant protein), and sodium channel mutations.[5] These circumstances have required dermatologists to resort more frequently to other first-line drugs, such as oral ivermectin and benzyl benzoate in 25% solution. Other options are topical ivermectin 1% and even 6%–33% sulfur-containing petroleum jelly,[6] since resistance to ivermectin has also been described.[5] Recent months have seen the emergence of new therapies, such as spinosad 0.9%, a neurotoxin recently approved by the US Food and Drug Administration for the topical treatment of scabies.[7]

The above reports point to the same issue – that the scabies mite is developing increasing resistance to permethrin – and suggest the need to reconsider its recommendation as a first-line treatment in clinical practice guidelines and to assess other options that are showing greater effectiveness.

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