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Rosacea treatment shifts focus

Rosacea has always been challenging to treat, but continued research of late has forged a better understanding of the potential pathogenesises of the disease, with the common denominator appearing to be inflammation. Although more work needs to be done, this relatively new insight into rosacea has already opened the door for novel effective therapeutic approaches, bringing much needed relief to rosacea patients.

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Much has been learned over the past decade about rosacea, but perhaps one of the most important pieces of the rosacea puzzle is that it is now understood to be a chronic inflammatory disorder; as such, the focus of treatment options has slowly shifted towards the anti-inflammatory and away from the antibiotic approach.

“We now know that rosacea is not an infectious disorder but a chronic inflammatory disorder, all of which leads to the concept that antibiotics are not the right way to go about treating it,” says Hilary E. Baldwin, M.D., Department of Dermatology, SUNY Downstate Medical Center, Brooklyn, New York.

Although antibiotics are effective in the treatment of rosacea, they work by being anti-inflammatory agents. When full dose antibiotic agents are used, Dr. Baldwin says that more harm is ultimately caused than good, including the potential development of antibiotic resistances. According to Dr. Baldwin, the tetracycline class of antibiotics frequently used in rosacea is, in fact, a very good anti-inflammatory drug and in order to maximize the anti-inflammatory effect, lower doses of the antibiotic should be used.

“Recognizing that doxycycline has both anti-inflammatory and antibiotic capacities, we started playing around with anti-inflammatory dose doxycycline for the treatment of rosacea, and found a dose that was low enough not to be an antibiotic but high enough to impart a full anti-inflammatory ability. This was in part a kind of verification that rosacea indeed was a chronic inflammatory disease where there was an up-regulation of cathelicidins and matrix metalloproteinases in the epidermis that were suppressed by doxycycline,” Dr. Baldwin says.

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There is an acute difference however between doxycycline (Oracea, Galderma), which is 40mg of doxycycline in a controlled dosing manner (and an anti-inflammatory dose), and low-dose antibiotics. At 40mg, doxycycline does not have antibiotic capabilities and therefore is not an antibiotic but instead an anti-inflammatory drug. According to Dr. Baldwin, 50mg/day doxycycline or minocycline, although effective in rosacea, are antibiotic doses, and low-dose at that. Antibiotic resistance is encouraged by inadequate dosing with antibiotics. Therefore, one could argue that 200mg/day is a less harmful dose than 50mg/day.

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