Clinically-Relevant Findings About Causes and Treatment of Rosacea

Research sheds light on the pathogenesis of the disease and patients’ experience.

Systemic Antibiotic Use is Declining. Dermatologists are using fewer systemic antibiotics and more topical agents to treat rosacea. According to the National Ambulatory Medical Care Survey from 2002 to 2006, 10 million physician visits had a diagnosis of rosacea, with the majority of patients prescribed metronidazole, tetracyclines, azelaic acid, and sodium sulfacetamide. Nearly three-quarters (74 percent) of rosacea presentations were associated with comorbidities. (J Drugs Dermatol. 9(11):1402-6.)

Anti-inflammatory Dose Doxycycline Effective in “Real World.” Anti-inflammatory-dose doxycycline (Oracea, Galderma) is effective as monotherapy or in combination with topical treatment, results of the largest community-based study of patients (n=1,421) with mild to severe papulopustular rosacea (PPR) confirm. The 12-week ORCA (Oracea for Rosacea: A Community-Based Assessment) study showed that 75 percent of patients in the monotherapy arm and 75.7 percent in the add-on arm achieved IGA ratings of “clear” or “near clear.” At week 12, 75 percent of monotherapy and 63.6 percent of add-on patients had no or mild erythema (as graded by the clinician). Adverse events occurred in less than seven percent of subjects in either arm and were generally mild or moderate. Ninety percent of community-based investigators said they were likely or very likely to continue prescribing therapy.

Toll-like Receptor 2 May Mediate Inflammation. Toll-like receptor 2 (TLR2) expression is increased in the epidermis of patients with rosacea but not in patients with other inflammatory skin disorders. New research suggests this over-expression may augment inflammatory responses to environmental stimuli in rosacea. Evidence from over-expression of TLR2 on keratinocytes, treatment with TLR2 ligands, and analysis of TLR2-deficient mice document a calcium-dependent release of kallikrein 5 from keratinocytes, which have been implicated in the pathogenesis of rosacea. (Journal of Investigative Dermatology, e-pub)

Artificial Heat is a Common Trigger. Indoor heat is a common rosacea trigger, cited by more than half (56 percent) of respondents in a survey by the National Rosacea Society (NRS, rosacea.org). Almost as many patients (54 percent) said a hot bath had caused a rosacea flare, and 42 percent cited hot beverages as flare-inducing. Heavy clothing had triggered a flare for 32 percent of respondents. Other heat sources that cause flares among the 431 survey respondents were fireplaces and bonfires, high-intensity lamps, steam baths, saunas and cooking. Most respondents said avoidance of triggers reduced flares.

Evidence Against Demodex is Mounting. A recent review notes a statistical association between Demodex mite density and rosacea, facial itching, and chronic blepharitis. Furthermore, the paper notes, treatments aimed at reducing Demodex numbers also improve papulovesicular rosacea-like lesions and spiny blepharitis. (Clin Dermatol. 28(5):502-4.) Additionally, a review of 48 English- and Chinese-language articles from 10 different countries and 28,527 subjects, found a pooled odds ratio in random-effects models of 7.57 (95 percent confidence interval, 5.39-10.62) for a significant association between Demodex and rosacea. (Arch Dermatol. 146(8):896-902)