NRS Introduces New Standard Classification and Pathophysiology of Rosacea

The updated classification system is based on the substantial advances in the understanding of rosacea gained through scientific investigations over the last 15 years.

BARRINGTON, Ill. (PRWEB) November 08, 2017 -- The National Rosacea Society (NRS) announced today that a new standard classification and pathophysiology of rosacea has been published in the Journal of the American Academy of Dermatology. (1) Developed by a consensus committee and review panel of 28 rosacea experts worldwide, the updated system is based on the substantial advances in the understanding of rosacea gained through scientific investigations over the last 15 years.

“There has been an explosion of research on rosacea since the first standard classification system appeared in 2002, and that has resulted in a much deeper scientific understanding of this common but once little-known disorder,” said Dr. Richard Gallo, chairman of dermatology, University of California-San Diego and chairman of the NRS consensus committee. “Growing knowledge of rosacea’s pathophysiology has established that a consistent multivariate disease process underlies its various clinical manifestations, which may also potentially be associated with other systemic disorders.”

Although the cause of rosacea remains unknown, researchers have now identified major elements of the disease process that may lead to significant advances in its treatment. Recent studies have shown that the initial redness is likely to be the start of an inflammatory continuum initiated by a combination of neurovascular dysregulation and the innate immune system. The role of the innate immune system in rosacea has been the focus of groundbreaking studies funded by the NRS, including the discovery of irregularities of key components known as cathelicidins. Further research has now demonstrated that a marked increase in mast cells, located at the interface between the nervous system and vascular system, is a common link in all major presentations of the disorder. Other studies have documented a possible genetic component, as well as the potential role of the human microbiome.

While the original classification system designated the most common groupings of primary and secondary features as subtypes, the committee noted that because rosacea appears to encompass a consistent inflammatory continuum, it now seems appropriate to focus on the individual characteristics, called phenotypes, that may result from this disease process. Observing the respective phenotypes in clinical practice will also encourage consideration of the full range of potential signs and symptoms that may occur in any individual patient, and assessment of severity and the selection of treatment may be more precisely tailored to each individual.

According to the new system, the presence of one of two phenotypes – persistent redness of the facial skin or, less commonly, phymatous changes where the facial skin thickens – is considered diagnostic of rosacea. Additional major cutaneous signs, which often appear with the diagnostic features, include papules and pustules, flushing, telangiectasia and certain ocular manifestations. The presence of two or more major phenotypes independent of the diagnostic features is also considered diagnostic of rosacea. Secondary phenotypes, which must appear with one or more diagnostic or major phenotypes, include burning or stinging, swelling and dry appearance.

Signs suggestive of ocular rosacea include telangiectases on the eyelid margin and bloodshot eyes, as well as inflammation and growth of fibrous tissue on the eye. Burning, stinging, light sensitivity and the sensation of a foreign object may also occur, as well as conjunctivitis, inflammation of oil glands at the rim of the eyelids.
(blepharitis) and crusty accumulations at the base of the eyelashes, in addition to others.

“Although rosacea’s various phenotypes may appear in different combinations and at different times, research suggests that all are manifestations of the same underlying disease process, and that rosacea may progress not only in severity but to include additional phenotypes,” Dr. Gallo said.

The committee also acknowledged the psychosocial effects of rosacea, noting that multiple patient surveys have documented rosacea’s substantial adverse impact on emotional, social and occupational well-being. They stressed that this should also be an important consideration, and suggested the development of appropriate severity scales to measure this dimension, as well as the need for further research to adequately assess rosacea’s negative effects.

The updated classification system was developed to provide standard criteria essential for performing research, analyzing results and comparing data from different sources, as well as to serve as a diagnostic reference in clinical practice. It also serves to provide common terminology for clear communication among a broad range of researchers, clinicians and health officials.

In an accompanying commentary(2) on rosacea comorbidities and future research, the committee summarized the many recent studies that have found associations between rosacea and increased risk for a growing number of potentially serious systemic disorders. These include cardiovascular disease, gastrointestinal disease, neurological and autoimmune diseases and certain cancers. Although causal relationships have not been determined, the committee noted these findings may significantly increase the clinical significance of rosacea as evidence that the disorder may be an outcome of systemic inflammation continues to mount.

In addition to comorbidities, they identified a number of areas where further research may be of particular value. Recent evidence suggests rosacea may appear often in individuals with darker skin types, and the updated standard criteria can be used to determine its prevalence in various ethnicities as well as populations worldwide. In addition, recent studies have found genetic factors that might affect the disease and may also be used to identify potential further comorbidities. Data also suggest that the skin microbiome may play a role.

The full pathophysiology of neurovascular dysregulation should be explored – from flushing and blushing, the interaction between the nervous and immune systems during neuroinflammation (flushing, erythema), the immune response (erythema, papules and pustules), through fibrosis – along with the potential role of adaptive immunity at the cellular level in certain phenotypes. Biomarkers should also be identified to confirm diagnosis and monitor progression or treatment results in clinical practice, and there is a need for therapy for ocular rosacea as well as continuing improvement in therapies for other phenotypes.

The committee noted that, as with the original classification of rosacea, the updated standard system is considered provisional and may require modification as the causes and pathogenesis of rosacea become clearer, and its relevance and applicability are tested by investigators and clinicians.

In addition to Dr. Gallo, the consensus committee included Dr. Richard Granstein, chairman of dermatology at Weill Cornell Medical College; Dr. Sewon Kang, chairman of dermatology at Johns Hopkins School of Medicine; Dr. Mark Mannis, chairman of ophthalmology at the University of California-Davis; Dr. Martin Steinhoff, chairman of dermatology, Qatar University and director of the University College Dublin Charles Institute of Dermatology; Dr. Jerry Tan, adjunct professor of dermatology at the University of Western Ontario; and Dr. Diane Thiboutot, professor of dermatology and vice-chair for research at the Pennsylvania State...
University.

About the National Rosacea Society

The National Rosacea Society is the world’s largest organization dedicated to improving the lives of the estimated 16 million Americans who suffer from this widespread but poorly understood disorder. Its mission is to raise awareness of rosacea, provide public health information on the disorder and support medical research that may lead to improvements in its management, prevention and potential cure.

Comprehensive information and materials on rosacea are available on the NRS website at [www.rosacea.org](http://www.rosacea.org). The NRS may also be followed on Facebook, Twitter and Pinterest for up-to-date information and tips on rosacea. Further information may be obtained by writing the National Rosacea Society, 196 James Street, Barrington, Illinois 60010; via email at rosceas(at)aol(dot)com; or by calling its toll-free number at 1-888-No-Blush.

References:

Contact Information
Mary Erhard
National Rosacea Society
+1 (847) 382-8971

Emma Terhaar
National Rosacea Society
(847) 382-8971

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