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What Is "PFE"? It May Just Be Time You Found Out....

With all the literature and research we have on acne and rosacea, there are still many unanswered questions. Over time, as we uncover more information on both preexisting and newly recognized pathophysiologic pathways, modes of drug action, alternative therapies, caveats related to basic skin care, and the potential roles for physical modalities, we often find that specific information that we thought was fact, is later altered, expanded, or corrected. What is interesting, and sometimes perplexing to me personally, is how difficult it is for the clinical dermatology community at large to incorporate well-published concepts into everyday clinical practice. In this commentary, I address an example with rosacea that emphasizes the correlation of pathophysiology with clinical manifestations, and the importance of selecting treatment that targets the specific clinical manifestations of rosacea.

If persistent facial erythema (PFE) is the pivotal diagnostic feature of cutaneous rosacea, including in both the presence or absence of papulopustular lesions, why are the vast majority of medical therapy prescriptions within dermatology written for agents that specifically target papulopustular lesions and perilesional erythema?

This statement about topical prescribing data for rosacea is based on information I have had the opportunity to review from a research perspective. Two FDA-approved brand topical alpha-agonists (brimonidine 0.33% gel, oxymetazoline 1% cream) have been available for years, and specifically reduce PFE by constricting the chronically dilated superficial centrofacial vasculature.[1-3] Admittedly, their effects are transient, lasting several hours after application, thus warranting daily use. However, they successfully reduce PFE, which is the diffuse facial redness that intensifies during vasodilatory flares (flushing of rosacea) and persists between flares. In patients with papulopustular rosacea, perilesional erythema resolves as the papules and pustules resolve, leaving behind the diffuse redness of PFE that we so commonly see on the central areas of the cheeks, forehead, and chin. Nevertheless, the majority of prescriptions written for rosacea are for topical metronidazole, topical ivermectin, topical azelaic acid, and oral doxycycline.

If one considers that many cases of rosacea present only with PFE and do not have papulopustular lesions, the question I posed above becomes more perplexing. I think there are many facets to the "composite answer" to this question, which include cost considerations and access to medication, concerns regarding worsening of facial erythema due to the early adverse experiences with topical brimonidine affecting approximately 15% of patients (ie, rebound, paradoxical erythema), uncertainty with how to incorporate alpha-agonist therapy into rosacea management, and inconsistency of educational and promotional activities. However, I believe a major reason is that many clinicians have not fully grasped the concept of PFE of rosacea and the importance of addressing it in rosacea management. Despite spending a lot of time and effort researching, publishing, and discussing rosacea with colleagues, it took me years to grasp the concept of PFE in rosacea. I encourage my colleagues, if they do not yet fully understand or embrace the concept of PFE, to learn more about it, as I believe that will improve their clinical ability to manage rosacea. *Consider the role of PFE in essentially all patients with cutaneous rosacea.*[4-6]

The importance of moving beyond the "subtyping" of rosacea, evaluating the clinical manifestations that are present in a given patient, and addressing which of those manifestations are bothersome to the patient, has been discussed in the literature.[5-8] This allows the clinician to recommend and select therapy that addresses each specific manifestation that is being treated. Ultimately, a combination of medical and physical approaches is warranted, either concomitantly or sequentially, to optimally manage rosacea. I credit my colleague, Dr. Julie Harper, for suggesting to me that the dermatology community at large needs a simple term like "PFE" to relate to. She ignited my desire to write this commentary.

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