Evaluating and Optimizing the Diagnosis of Erythematotelangiectatic Rosacea

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KEYWORDS

• Diagnostic • History • Physical • Differential

KEY POINTS

- An accurate diagnosis and classification are fundamentally essential for clear communication among researchers and health care providers.
- Early recognition improves clinical outcomes and quality of life and reduces morbidity.
- A thorough history and physical examination are critical in distinguishing between rosacea and other diagnoses that may present similarly.

INTRODUCTION

Rosacea is a common chronic inflammatory dermatosis with a prevalence between 0.1% and 10%.[1–4] It is associated with a high incidence of embarrassment, social anxiety, depression, and decreased quality of life.[5] Despite psychosocial complications, rosacea is often undiagnosed, misdiagnosed, undertreated, or mistreated, especially in skin of color.[2,6–14]

Rosacea is defined by recognizable morphologic features; no histologic or diagnostic tests are available.[15–17] The National Rosacea Society (NRS) consensus is the most widely used rosacea criteria (**Table 1**).[18] In this paradigm, optimal evaluation and diagnosis of rosacea incorporate current scientific knowledge (increase diagnostic sensitivity) and exclude diseases with similar phenotypic features (increase diagnostic specificity).[19]

An accurate diagnosis and classification are fundamentally essential for clear communication among researchers and health care providers.[20] In addition, early recognition improves clinical outcomes, improves quality of life, and reduces morbidity.[5,21–25] The purpose of this article is to describe an optimal clinical approach to diagnosing the most prevalent rosacea subtype, erythematotelangiectatic rosacea (ETR), which commonly occurs with ocular rosacea, but much less frequently occurs with the other rosacea subtypes.[3,26–28] The article begins by summarizing the current diagnostic foundation set by NRS and adds diagnostic specificity by incorporating a critical question, "what is not rosacea?" The authors briefly highlight shared features of ETR and papulopustular rosacea (PPR).

ROSACEA: CURRENT CLINICAL FOUNDATION

Rosacea is a diagnostic term that describes a chronic heterogeneous group of signs and symptoms primarily affecting the convexities of the midface.[29] Persistent erythema lasting at least 3 months with a tendency to spare periocular skin is the most important primary feature of ETR and PPR; flushing, papules, pustules, and

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Table 1
Rosacea diagnostic and classification criteria

Diagnostic Criteria: Requires the Presence of ≥1 Primary Feature in a Centrofacial Distribution	
Primary Features	**Secondary Features**
Transient erythema	Ocular manifestations
Nontransient erythema	Burning or stinging
Telangiectases	Phymatous changes
Papules and pustules	Dry appearance, plaques, edema, or peripheral location
Classification Criteria	
Subtype	**Characteristics**
Erythematotelangiectatic	Flushing and persistent central facial erythema with or without telangiectasia
Papulopustular	Persistent or transient central facial papules and/or pustules often in same stage of development
Phymatous	Thickening skin, irregular surface nodularities and enlargement, usually beginning as patulous follicles; may occur on the nose, chin, forehead, cheeks, or ears
Ocular	Foreign body sensation in the eye, burning or stinging, dryness, itching, ocular photosensitivity, blurred vision, telangiectasia of the sclera or other parts of the eye, or periorbital edema

telangiectasias are additional features.[16] Pediatric rosacea presents similarly, except sebaceous gland hyperplasia does not occur.[30,31] The mean age of onset, in children, is 6 years of age with an average delay in diagnosis of 3 years.[32] Rosacea is rarely diagnosed adequately in skin of color, partially because facial erythema and telangiectasias are less visually apparent.[9,10,33]

Flushing is often the first sign, typically limited to the convexities of the midface, especially the cheeks.[34–36] Extrafacial flushing occurs in 24% of subjects, often involving the throat or superior chest.[1,35] Flushing can be idiopathic or may be triggered by external factors; this manifestation may also be accompanied by heat (97%), skin tension (36%), sweating (30%), burning/stinging (25%), and/or pruritus.[1,16,35] Environmental, dietary, and topical factors may predispose and exacerbate erythema and skin sensitivity manifesting as pruritus, stinging, burning, or xerosis.[37–40]

Erythematotelangiectatic Rosacea

ETR is characterized by persistent centrofacial erythema, transient erythema (flushing), and sensitive skin with or without telangiectasias.[16,30,41,42] Flushing, in response to internal or external stimuli, is often a prominent and bothersome feature.[16] Flushing may become more frequent and longer in duration as the disease progresses.[43] The skin of subjects with ETR typically appears dry and rough with possible fine scale; these findings occur more frequently in ETR than in other rosacea subtypes.[35] Although treatments have been developed for the redness of ETR, intolerance due to skin irritation of topicals often limits adherence.[44] Nasal involvement may serve as a marker for predicting progression to more severe rosacea.[45]

Papulopustular Rosacea

PPR is characterized by the presence of small domed inflammatory papules and pustules often on a background of persistent centrofacial erythema with universal periocular sparing.[41,44] Two-thirds of patients with PPR in one series had a preceding diagnosis of ETR.[35] Flushing and skin sensitivity are common, suggesting that PPR commonly coexists with ETR.[16] Papules and pustules tend to be located on the cheeks (80%), nose (67%), chin (47%), forehead (40%), and neck (7%).[35] The papules are persistent in 58% of patients, whereas the remaining 42% have transient papules and pustules that occur with flares.[35] Transient papules associated with flares often have substantial resolution of the palpable component within 2 weeks; residual erythema is much slower to fade.[35] Similar to acne, inflammatory lesions may occasionally rupture, resulting in extension of erythema. Rarely, PPR with ETR may have repeated episodes of inflammation and tissue remodeling that can lead to chronic lymphedema.[46,47] Despite treatment, the risk of relapse is 40% after cessation of treatment, often requiring maintenance therapy.[48–50]