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Journal

Dermatology Online Journal, 29(6)

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Publication Date

2023

DOI

10.5070/D329663006

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Actinic comedonal plaque sine elastosis: a rare presentation or a hitherto unexplored variant of comedonal plaque in skin of color?

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Keywords: actinic comedonal, damage, Favre Racouchot, plaque, solar elastosis

To the Editor:

A 65-year-old Indian man with Fitzpatrick phototype V skin presented with a two-year history of a dark-colored patch studded with 'dark pimples' on the right side of the forehead. Physical examination revealed an asymptomatic horizontal plaque on the forehead studded with skin-colored to yellowish non-tender papules, nodules, and open comedones (**Figure 1**). Numerous 1-2mm lesions of dermatosis papulosa nigra were present on the face. There were no stigmata of chronic actinic damage such as prominent wrinkling, deep furrowing of skin, actinic keratoses, cutis rhomboidalis nuchae, or basal cell cancer. Dermoscopy demonstrated a score of homogeneously distributed round comedo-like openings with light to dark brown keratotic plugs on a yellow background (**Figure 2**).

A 4mm punch biopsy demonstrated hyperkeratosis, papillomatosis, dilated follicular ostia, closed

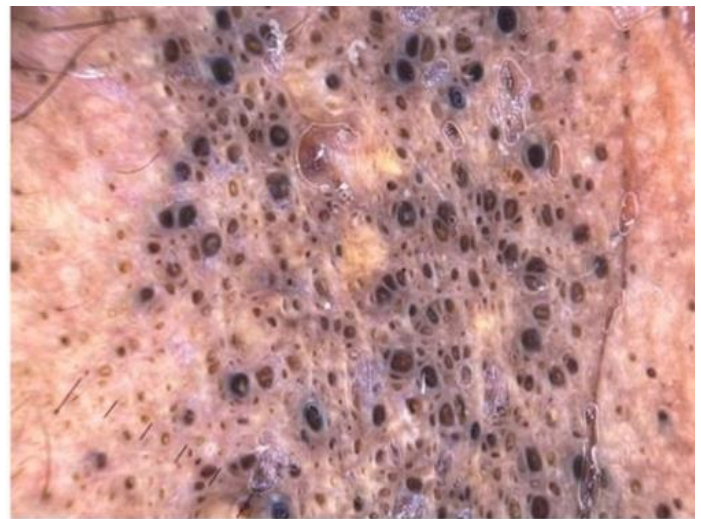


Figure 2. Dermoscopic image demonstrating several round-to-oval comedo-like openings with light-to-dark brown keratotic plugs on a yellow background. (DermLite DL3N, 3Gen, USA).

comedones filled with compact densely eosinophilic keratin, and epidermal cysts filled with loose thin keratin in an otherwise normal skin (**Figure 3**). No elastosis was visible on routine H&E or Verhoeff Van Giesen stained tissue (**Figure 4**). The patient had been a heavy smoker for thirty years and worked indoors. There was no history of any local application, trauma, or exposure to ionizing radiation. A diagnosis of actinic comedonal plaque without solar elastosis was made. The patient refused any treatment.

Favre-Racouchot syndrome (FRS), (nodular elastosis with cysts and comedones) occurs bilaterally on sun-

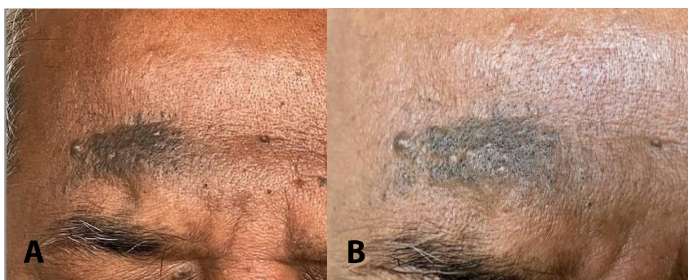


Figure 1. A) Far view of clinical patient showing a plaque over the right eyebrow. **B)** Closer view of plaque over right eyebrow with open comedones and skin-colored yellowish non-tender papulonodules.

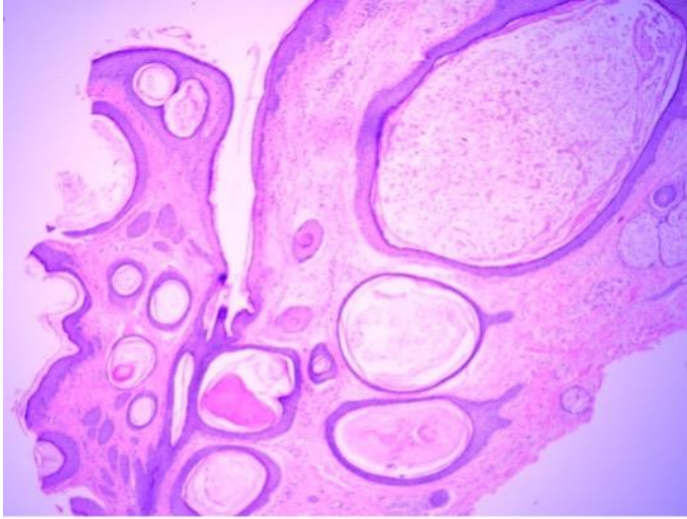


Figure 3. Histopathology demonstrating hyperkeratosis, papillomatosis, dilated follicular ostia filled with laminated keratin, and closed comedones filled with compact densely eosinophilic keratin and larger epidermal cysts. H&E 10x.

exposed infraorbital and malar areas [1]. Actinic comedonal plaque (ACP) is a plaque-like, ectopic form of FRS which occurs on the neck, chest, nasolabial fold, dorsum of the nose, helix of ears, and forearms [2]. Both present with comedones, papules, and cysts, most often over wrinkled, furrowed, aging skin (Table 1), [3]. All but one report of ACP have been described in light-skinned individuals, especially smokers who are most susceptible to elastic damage from chronic sun exposure [2,3].

This case caused us to rethink our ideas about the central role of the sun in ACP. It has also been suggested in the past that FRS in elderly white men is not always associated with chronic sun exposure [4,5]. The absence of clinical and histopathologic

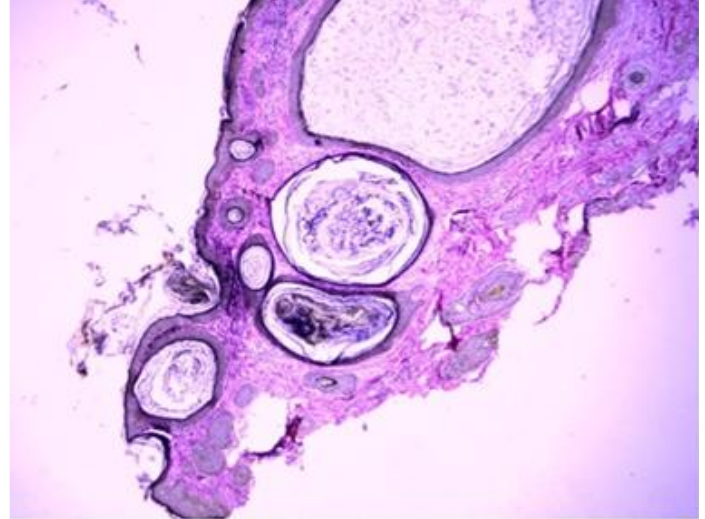


Figure 4. No elastotic degeneration seen on Verhoeff Van Gieson stain 10x.

evidence of sun damage and the localized unilateral nature of the ACP in this patient, argues against a central role of actinic damaged elastic tissue that is the recognized cause of FRS. Clinical and histological data from more patients with skin of color presenting with ACP are required to further strengthen the hypothesis that this presentation is a novel entity that would be best termed *acquired comedonal plaque sine elastosis*.

Potential conflicts of interest

Robert Brodell MD discloses the following financial interest. Advisory boards: Novan and Amgen. Research funding: Pfizer, Novartis, and Sanofi. Stock: Veragen, Inc. Ms. Hiltz, and Drs Behera, Ghosh, and Verma have no conflicts of interest.

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Table 1. A comparison of Favre-Racouchot syndrome (FRS), acquired comedonal plaque (ACP), nevus comedonicus (NC), and this case of ACP sine elastosis (ACPSE).

	FRS [7]	ACP [9]	NC [10]	Our case
Age of onset	Elderly	Elderly	At birth, early childhood, or adulthood	Two years prior to presentation
Gender	Male predominantly	Males > Females	No gender differences	Male
Clinical morphology	Multiple large, open, black comedones over a diffuse yellowish and wrinkled actinic damaged and atrophic skin. Symmetrically distributed	Yellowish plaques with cysts and comedones and marked solar elastosis	Grouped, dilated follicular openings containing soft, dark keratin that resemble comedones arranged in a group, band-like, or in a linear pattern along the lines of Blaschko	Asymptomatic horizontal plaque over the forehead studded with open comedones, skin-colored and yellowish non-tender papulonodules
Location	Temporal and periorbital areas Uncommonly: lateral neck, retroauricular areas, earlobes, and forearms	Neck, thorax, dorsum of the nose, the helix of ears and forearms	Not restricted to the photo-exposed area	Forehead above the right eyebrow
Association	Solar damage is implicated in most cases. Association with cutis rhomboidalis nuchae, cutaneous myxoma, actinic keratosis, basal and squamous cell carcinoma, trichostasis spinulosa, keratoacanthoma and eyelid papilloma	Radiation Heavy smoking	Extracutaneous manifestations (central nervous system, skeletal, ophthalmologic, neurological, and spinal abnormality)	Patient had a history of sun exposure for multiple decades. Heavy smoker
Dermoscopic features	Multiple open and closed comedones filled with light-to-dark brown, sometimes black, keratin plugs, yellowish hue, and linear arborizing vessels [8]	An erythematous background, scar-like depigmentation areas, chrysalis, fine linear irregular vessels, milium-like cysts and comedones	Numerous well-defined, circular and barrel-shaped, light and dark brown homogenous areas surrounding keratin pearls	Numerous homogeneously distributed round, comedo-like openings with light to dark brown keratotic plugs over a yellow background
Pathological features	Dilated follicles filled with keratinous debris, marked solar elastosis and sebaceous gland atrophy	Histological features similar to those seen in FRS. However, sebaceous gland hyperplasia can be seen	Dilated keratin-filled invagination of the epidermis and no solar elastosis. Sebaceous gland atrophy. Abortive pilar structure	Dilated follicular infundibula with a few normal-sized sebaceous gland. No solar elastosis Verhoff Van Giesen stain negative
Treatment	Topical retinoids Daily oral isotretinoin Combination of superpulsed carbon dioxide laser to vaporize the epidermis followed by extraction of cystic and	Sunscreen Topical retinoids	Small lesions: Surgical excision with tissue expansion. Large and extensive lesions- superficial dermabrasion and regular comedone extraction. Localized lesions-topical retinoic acid, ammonium	Tretinoin 0.05% cream. Sunscreen Contemplating comedo extraction

	comedonic material with a pair of forceps. Sunscreen		lactate, tacalcitol and tazarotene with calcipotriene. Extensive inflamed acneiform nevi. Oral isotretinoin	
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