Under the Aegis of IADVL WB Academy

Clinical Focus on Dermatology

Acne

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Contents

CHAPTER

4

Mimickers of Acne

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INTRODUCTION

A patient walks in with what appears to be a routine case of acne vulgaris. However, they present with a treatment history filled with the usual investigations and therapies without any avail. As we delve deeper, we find ourselves entangled in a plot thick with twists and turns. In dermatology, we encounter a spectrum of acne-like cutaneous conditions that pose significant diagnostic challenges. These entities are collectively termed "*acne mimickers*". These demonstrate a variety of clinical manifestations that closely resemble acne vulgaris, yet necessitate distinct diagnostic modalities and management approaches. The complexity lies in discerning subtle nuances in the presentation as well as understanding the underlying pathophysiology unique to each entity. From conditions, such as milia to nevus comedonicus, the array of acne mimickers spans spectrum of etiologies ranging from congenital, physiological to drug-induced eruptions. Furthermore, the patient age, comorbidities, and medication history further compound the diagnostic dilemma **(Table 1 and Box 1)**. Consequently, navigating these diagnostic pitfalls requires a meticulous clinical evaluation, and judicious utilization of adjunctive diagnostic modalities, such

TABLE 1: Acne mimickers based on the age of the patient.

Newborn	Infancy	Childhood	Adolescence	Adulthood
• Neonatal cephalic pustulosis	• Milia • Miliaria (heat rash)	• Acne vulgaris • Folliculitis	• Acne vulgaris • Folliculitis	• Acne vulgaris • Rosacea
• Erythema toxicum neonatorum	• Infantile acne	• Impetigo • Seborrheic dermatitis	• Rosacea (rare in adolescence)	• Perioral dermatitis • Hidradenitis suppurativa
• Neonatal acne		• Rosacea (rare in childhood)	• Perioral dermatitis • Hidradenitis • suppurativa	• Folliculitis • Drug-induced acneiform eruptions • Chloracne (occupational exposure)

BOX 1: Acne mimickers based on morphology of the lesions.

Conditions with comedones:
- Nevus comedonicus
- Favre–Racouchot Syndrome

Acne in the name:
- Acne rosacea, var. perioral dermatitis
- Acne agminata
- Chloracne
- Drug-induced acne

Appendageal abnormalities:
- Sebaceous hyperplasia
- Miliaria
- Milia

Benign tumors:
- Syringoma
- Trichoepithelioma
- Angiofibroma (adenoma sebaceum)

Conditions with a follicular component:
- Folliculitis
- Gram-negative folliculitis
- Eosinophilic folliculitis
- Follicular mycosis fungoides
- Pseudofolliculitis barbae
- Keratosis pilaris faciei

as dermoscopy and histopathology. Based on our discussion that follows, we believe that clinicians can enhance their diagnostic accuracy, optimize therapeutic strategies, and ultimately improve outcomes in patients with acne mimickers **(Figs. 1 and 2)**.

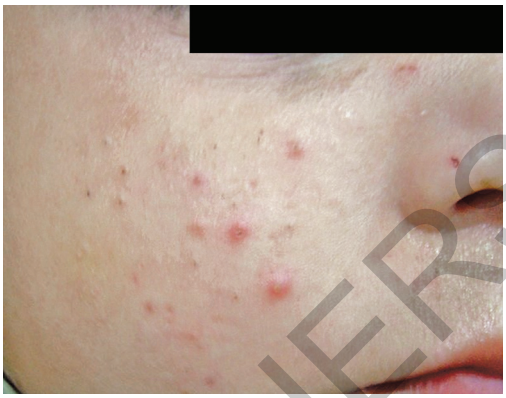

FIG. 1: Comedones with erythema seen in neonatal acne.

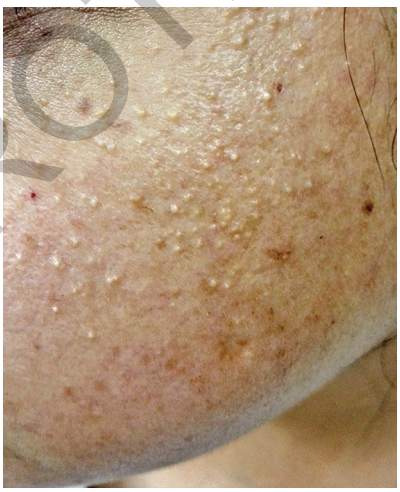

FIG. 2: Skin-colored small papules seen in milia.

NEONATAL CEPHALIC PUSTULOSIS

Neonatal cephalic pustulosis (NCP) is a benign self-limiting condition that is commonly observed in newborns, typically within the first few weeks of life. The pathogenesis of NCP may involve transient colonization of an infant's skin by *Malassezia* spp.[1] Its characteristic features are presented in **Table 2**. Clinical management involves gentle skin care with mild cleansers and avoidance of occlusive products. Most cases resolve spontaneously within a few weeks to months without long-term sequelae. However, secondary bacterial infections may rarely occur, which warrant the appropriate antimicrobial therapy.

ERYTHEMA TOXICUM NEONATORUM

Erythema toxicum neonatorum (ETN) is a common benign skin condition that affects newborns and typically appears within the

first few days to weeks of life. The etiology of ETN is believed to involve an exaggerated response to maternal or environmental antigens.[2] Gentle skin care and reassurance is needed, as it is a self-limiting, which resolves spontaneously. **(Table 2)**. ETN carries an excellent prognosis with no long-term sequelae.

TABLE 2: Summary of acne mimickers and their clinical features.

Disease	Clinical features	Test
Neonatal cephalic pustulosis	• Erythematous papules and pustules primarily over the face, especially the cheeks and forehead • Absence of any systemic symptoms	• Clinical diagnosis • Microscopic examination of the pustular fluid may reveal yeast forms or pseudohyphae
Erythema toxicum neonatorum	• Transient erythematous macules, papules, and pustules that are scattered over the body • Predilection for the face, trunk, and extremities • Erythematous halo may be present	• Diagnosed clinically based on characteristic lesions and the lack of systemic symptoms
Neonatal acne	• Small, red papules, or pustules on the face, particularly the cheeks, nose, and forehead • Usually transient and resolve on their own without treatment within a few weeks to months	• Clinical diagnosis • Specific tests are rarely necessary
Milia	• Small, dome-shaped bumps, typically on the face, cheeks, nose, and around the eyes • Often asymptomatic but may occasionally become inflamed or tender	• Clinical diagnosis • Specific tests are not necessary
Miliaria	• Small, red papules or vesicles • Sometimes accompanied by itching or prickling sensations • Typically appear in areas of sweat trapping, such as the neck, chest, back, and groin	• Clinical diagnosis based on the morphology and a history of exposure to heat and humidity • Specific tests are rarely needed
Folliculitis	• Itching, burning, or tenderness • Can occur anywhere on the body where hair follicles are present, including the scalp, face, neck, chest, back, arms, and legs	• Clinical diagnosis based on the morphology and a history of predisposing factors such as shaving, friction, or exposure to hot tubs • Bacterial or fungal cultures, may be necessary only in refractory or severe cases

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Disease	Clinical features	Test
Gram-negative folliculitis	• Multiple, small, red papules and pustules, which resemble traditional acne vulgaris but often more inflammatory and resistant to conventional treatments • May affect various areas of the face, particularly the cheeks and chin, as well as the trunk and buttocks	• Clinical diagnosis based on morphology and history of prolonged antibiotic use • Bacterial cultures or gram staining may be performed to confirm the diagnosis or identify the causative organism
Eosinophilic folliculitis	• Erythematous papules and pustules surrounding hair follicles • Often associated with intense itching or burning sensations • May evolve into crusted plaques or resolve spontaneously, leaving hyperpigmented patches	• Clinical diagnosis • Skin biopsy or eosinophil counts, may be performed
Follicular mycoses fungoides	• Follicular papules, plaques, or tumors • Typically distributed on the head and neck, although other body sites may be involved • May be erythematous, scaly, or ulcerated	• Histopathological examination reveals atypical lymphocytes infiltrating the hair follicles and surrounding dermis, accompanied by epidermal changes such as epidermotropism or Pautrier microabscesses • Immunohistochemical analysis may be performed
Pseudofolliculitis barbae	• Erythematous papules and pustules • Often surrounded by a halo of hyperpigmentation • Typically affecting the beard area in men and the legs or bikini area in women • May be asymptomatic or associated with itching, burning, or discomfort	• Clinical diagnosis based on morphology and history of shaving or hair removal • Specific tests are rarely necessary
Keratosis pilaris faciei	• Multiple, discrete, skin-colored to slightly erythematous papules with a rough texture resembling sandpaper • May be asymptomatic or associated with mild itching or irritation	• Clinical diagnosis • Skin biopsy is rarely necessary
Impetigo	• Small, red papules or vesicles that quickly rupture, forming honey-colored crusts • Typically surrounded by erythema and may be pruritic • Commonly affects areas with broken skin, such as the face, particularly around the nose and mouth, as well as the extremities	• Clinical diagnosis • Bacterial cultures may be performed in cases where the diagnosis is uncertain or to guide treatment

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Disease	Clinical features	Test
Seborrheic dermatitis	• Erythematous plaques covered with greasy, yellowish scales • Often accompanied by itching or burning sensations • Typically fluctuates in severity, with periods of exacerbation and remission	• Clinical diagnosis • Skin scrapings or fungal cultures may be performed to rule out other conditions or confirm the presence of *Malassezia*
Rosacea	• Episodes of flushing and persistent redness, often accompanied by inflammatory papules and pustules resembling acne • Rhinophyma, ocular manifestations, and phymatous changes may occur	• Primarily clinical diagnosis based on the characteristic appearance of the lesions and distribution pattern, along with the absence of comedones • Skin biopsy or dermatoscopy may be performed to rule out other conditions or confirm the diagnosis
Hidradenitis suppurativa	• Painful, inflamed nodules that may progress to abscesses and sinus tracts, thus leading to scarring and fibrosis • Often follows a relapsing and remitting course, with periods of exacerbation and quiescence	• Clinical diagnosis • Bacterial cultures or imaging studies may be performed to rule out secondary infection or associated complications
Perioral dermatitis	• Small, red papules, and pustules surrounded by a zone of erythema, often resembling acne or rosacea • May be accompanied by itching or burning sensations • Lesions typically spare the vermillion border of the lips	• Clinical diagnosis based on morphology and distribution pattern • Skin biopsy or bacterial cultures may be performed
Drug-induced acneiform eruptions	• Closely resemble traditional acne vulgaris, making diagnosis challenging without a thorough medication history • Common culprit medications include systemic corticosteroids, antiepileptic drugs (e.g., phenytoin), immunosuppressants (e.g., cyclosporine), and targeted cancer therapies (e.g., epidermal growth factor receptor inhibitors)	• Clinical diagnosis based on the temporal relationship between drug initiation and onset of skin lesions, as well as the absence of comedones • Skin biopsy or patch testing
Lupus miliaris disseminatus faciei	• Discrete, asymptomatic papules, and nodules • Often resembles milia or acne	• Clinical diagnosis based on morphology and exclusion of other granulomatous or infectious conditions • Skin biopsy or immunofluorescence studies may be performed

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Disease	Clinical features	Test
Nevus comedonicus	• Linear or grouped clusters of dark, keratin-filled plugs resembling blackheads, often arranged in a linear or whorled pattern • Typically asymptomatic but may become inflamed or infected, leading to the formation of cysts or abscesses	• Clinical diagnosis based on morphology and onset in infancy or childhood • Skin biopsy or imaging studies may be performed
Favre–Racouchot syndrome	• Multiple, discrete, yellowish nodules and cysts surrounded by telangiectatic vessels, often giving the appearance of a "solar comedone" • Typically asymptomatic but may become inflamed or infected, leading to secondary complications such as scarring or hyperpigmentation	• Clinical diagnosis based on morphology and history of chronic sun exposure • Skin biopsy or imaging studies may be performed
Syringoma	• Multiple, discrete, asymptomatic papules, often arranged in a symmetrical pattern around the eyes • May be cosmetically bothersome but are otherwise benign and do not typically cause symptoms	• Clinical diagnosis • Skin biopsy or dermatoscopy may be performed
Trichoepithelioma	• Multiple, discrete, asymptomatic papules or nodules, often with a smooth or slightly verrucous surface • May be solitary or multiple and are typically slow-growing and nonaggressive	• Clinical diagnosis • Histopathological examination may be performed
Adenoma sebaceum	• May be present from childhood and tends to increase in number and size with age	• Diagnosis is usually clinical, based on the characteristic appearance of the lesions and association with other features of tuberous sclerosis complex (TSC), such as cortical tubers, subependymal nodules, and renal angiomyolipomas • Genetic testing or imaging studies may be performed

NEONATAL ACNE

Neonatal acne affects newborns typically within the first few weeks of life.[3] These acnes are thought to be related to maternal hormones that stimulate an infant's sebaceous glands and in Indian scenario massage with paraffin oil also contributes to it. Treatment options for neonatal acne are limited. They primarily involve gentle skin care with mild cleansers and avoidance of harsh skincare routine. In most cases, neonatal acne clears up without any long-term consequences **(Table 2)**, although it may recur briefly during the first few months

of life. Complications such as scarring or hyperpigmentation are extremely rare **(Fig. 1)**.

MILIA

Milia are small, benign cysts, which commonly appear as tiny white or yellowish papules on the skin **(Table 2 and Fig. 2)**. They are a result of keratin getting trapped beneath the cutaneous surface, thus forming small cysts.[4] They can affect individuals of any age. Treatment mainly includes gentle exfoliation, topical retinoids, and extraction or curettage. However, milia may resolve spontaneously. Secondary infection or scarring may develop if they are manipulated.

MILIARIA

Miliaria, commonly known as heat rash/prickly heat,[5] occurs when sweat gets trapped in the sweat ducts, leading to blockage and inflammation. It is often seen in hot and humid environments **(Table 2)**, particularly in infants and individuals engaged in strenuous physical activity. Management involves keeping the affected area cool and dry, avoiding tight clothing, and using soothing lotions or calamine lotion to alleviate symptoms. Most cases of miliaria resolve spontaneously with the above measures. However, if symptoms persist or worsen, medical evaluation may be necessary.

FOLLICULITIS

Folliculitis is characterized by inflammation of the hair follicles.[6] It may develop due to bacterial, fungal, or viral infections, or mechanical irritation. It can affect individuals of all ages and may present as small, red papules or pustules around hair follicles **(Fig. 3 and Table 2)**. The treatment includes topical or oral antimicrobial agents as well as measures to reduce mechanical irritation. Most cases of folliculitis resolve with the appropriate treatment; however, recurrent or chronic forms of folliculitis may require long-term therapy. Complications such as scarring or hyperpigmentation can occur in severe cases or with inappropriate management.

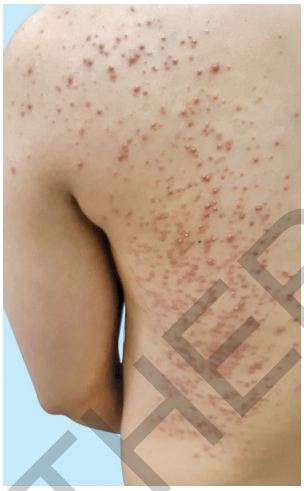

FIG. 3: Small, erythematous papules and a few pustules seen in pityrosporum folliculitis.
Courtesy: Dr Arun Joshi.

GRAM-NEGATIVE FOLLICULITIS

Gram-negative folliculitis is a bacterial infection of the hair follicles caused by gram-negative bacteria.[7] It typically occurs as a complication of long-term antibiotic treatment for acne vulgaris or other dermatological conditions **(Table 2)**. The most common causative organisms include *Pseudomonas aeruginosa*, *Escherichia coli*, and *Klebsiella spp*. Treatment options for gram-negative folliculitis include topical and systemic antibiotics effective against gram-negative bacteria, such as trimethoprim–sulfamethoxazole, fluoroquinolones, or third-generation cephalosporins. Furthermore, discontinuation of the offending antibiotic and avoidance of future prolonged antibiotic courses may be necessary to prevent recurrence. Despite treatment, gram-negative

folliculitis may persist or recur, particularly in cases of chronic or untreated infections. Scarring or hyperpigmentation may be a sequala of recurrent infections.

EOSINOPHILIC FOLLICULITIS

Eosinophilic folliculitis, also known as eosinophilic pustular folliculitis, is a rare inflammatory skin condition characterized by recurrent crops of pruritic, follicular-based papules and pustules, symmetrically distributed on the face, trunk, and extremities. It is due to the hypersensitivity reaction or abnormal immune response to various triggers like infectious agents, medications, and systemic diseases **(Table 2)**.[8] Course of action includes topical and systemic corticosteroids, antihistamines, and immunomodulatory agents such as cyclosporine or dapsone. Apart from pharmacological management, avoidance of trigger factors such as hot water, excessive sweating, and irritating skin care products may help in preventing recurrence. This condition may persist or recur, particularly in cases of chronic or untreated inflammation. This may lead to secondary infection, scarring, or postinflammatory hyperpigmentation (PIH).

FOLLICULAR MYCOSES FUNGOIDES

Follicular mycosis fungoides (FMF) is a rare variant of cutaneous T-cell lymphoma characterized by the infiltration of malignant T lymphocytes into the hair follicles and surrounding skin **(Table 2)**. The etiology of FMF is believed to involve genetic predisposition and chronic antigenic stimulation.[9] Treatment with topical corticosteroids, phototherapy, systemic retinoids, and systemic chemotherapy in advanced cases has been reported with varying success. Additionally, supportive care and psychosocial support are essential for managing symptoms and improving quality of life. Despite treatment, FMF is often progressive and may require long-term management with regular follow-up to monitor disease progression and response to therapy. Lymphadenopathy and systemic involvement may occur in advanced course of the disease.

PSEUDOFOLLICULITIS BARBAE

Pseudofolliculitis barbae (PFB), also known as razor bumps or ingrown hairs, is an inflammatory condition characterized by papules, pustules, and occasionally nodules that develop after shaving or hair removal, particularly in individuals with curly or coarse hair.[10] The condition arises when cut hairs curve back into the skin, causing inflammation and follicular disruption **(Table 2)**. Treatment options for PFB include gentle shaving techniques, using sharp razors, shaving in the direction of hair growth, and avoiding close shaving. Topicals such as salicylic acid, benzoyl peroxide, retinoids, and corticosteroids may be used to reduce inflammation and prevent ingrown hairs. Laser hair removal or electrolysis may be considered for long-term management of refractory cases. Despite treatment, PFB may recur, with continued shaving or faulty hair removal practices.

KERATOSIS PILARIS FACIEI

Keratosis pilaris faciei (KPF) is characterized by the presence of small, rough, follicular papules on the face, particularly on the cheeks, forehead, and temples **(Fig. 4 and Table 2)**. KPF is believed to involve hyperkeratosis and follicular plugging, leading to the formation of keratin-filled papules.[11] Treatment armamentarium for KPF include gentle exfoliation with keratolytic agents such as alpha hydroxy acids or urea-containing creams, moisturizers,

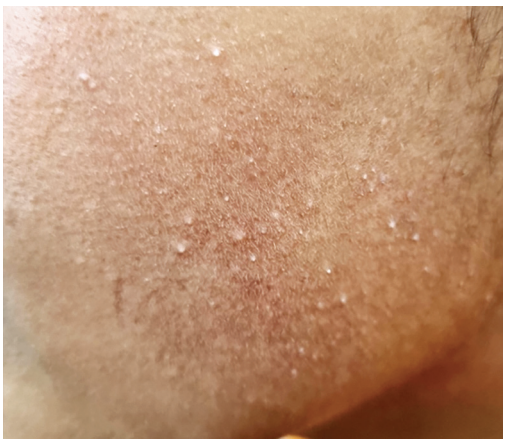

FIG. 4: Small, rough, follicular papules on the face seen in keratosis pilaris faciei.

topical retinoids, and topical corticosteroids to reduce inflammation. Lifestyle modifications such as avoiding harsh skin care products and excessive scrubbing may help alleviate symptoms. KPF tends to be a chronic and recurrent condition, often requiring long-term management. Scaring or hyperpigmentation may occur with aggressive or inappropriate treatment.

IMPETIGO

Impetigo is a highly contagious bacterial skin infection that primarily affects children, although it can occur in individuals of any age **(Table 2)**. It is usually caused by *Staphylococcus aureus* or *Streptococcus pyogenes* bacteria.[12] It can be managed with topical or oral antibiotics. Most of the cases resolve with appropriate treatment. Cellulitis and post-streptococcal glomerulonephritis rarely occur in severe cases as a sequel **(Fig. 5)**.

SEBORRHEIC DERMATITIS

Seborrheic dermatitis is characterized by erythema and scaling, primarily affecting areas rich in sebaceous glands, such as the scalp, face, and upper trunk **(Table 2)**. The exact etiology is not fully understood but is believed to involve a combination of genetic predisposition, sebum production, and the presence of mild *Malassezia spp.*[13] Topical antifungal agents, mild corticosteroids, keratolytics, and calcineurin inhibitors, depending on the severity and location of the lesions, have been used to successfully treat this common condition. Although seborrheic dermatitis is a chronic condition, it can be effectively managed with appropriate treatment and lifestyle modifications. Psychosocial distress may occur in severe or refractory cases.

ROSACEA

Rosacea is characterized by transient or persistent erythema, telangiectasias, papules, and pustules affecting the central face **(Table 2)**. The etiology of rosacea involves a combination of genetic predisposition, dysregulation of the immune system, vascular abnormalities,

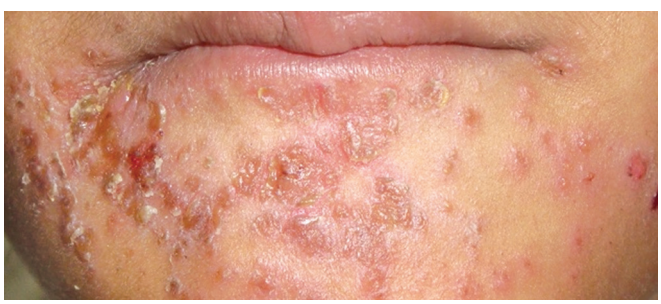

FIG. 5: Honey-crusted lesions seen in impetigo.

and environmental triggers.[14] Topical and oral antibiotics, topical metronidazole, azelaic acid, and oral isotretinoin in severe cases are the available pharmacological options besides lifestyle modifications and avoidance of triggers such as sunlight, spicy foods, and alcohol. These measures can help to manage symptoms and reduce flare-ups. There may be relapses and remissions. Ocular involvement and psychosocial impact may necessitate multidisciplinary and customized treatment approach **(Fig. 6)**.

HIDRADENITIS SUPPURATIVA

Hidradenitis suppurativa (HS) is a recurrent chronic inflammatory skin condition characterized by recurrent, painful nodules, abscesses, and sinus tracts **(Table 2)**, primarily affecting the intertriginous areas such as the axillae, groin, and buttocks. The etiopathogenesis involve follicular occlusion, abnormal immune response, environmental factors, and genetic predisposition.[15] The available treatment armory includes topical and systemic antibiotics, intralesional corticosteroids, immunomodulatory agents, biologicals, and surgical interventions such as incision and drainage or excision of affected areas. Weight loss and smoking cessation may help to reduce disease severity and improve outcomes. It is often associated with scarring, contractures, and systemic inflammation, which significantly impacts patients' quality of life. Thus, HS requires multidisciplinary approach tailored to individual needs. Further, long-term follow-up is often required to monitor recurrence and complications.

PERIORAL DERMATITIS

Perioral dermatitis is an inflammatory skin condition characterized by erythematous papules and pustules, primarily affecting the perioral, perinasal, and periocular areas **(Table 2)**. Perioral dermatitis is a result of microbial colonization, impaired skin barrier function, and topical steroid misuse.[16] It can be managed with discontinuation of topical steroids, gentle skin care with mild cleansers and emollients, topical antibiotics (e.g., metronidazole) or azelaic acid, and oral antibiotics (e.g., tetracyclines or macrolides) in severe or refractory cases. Additionally, avoidance of potential trigger factors such as harsh cosmetic products and occlusive moisturizers may help prevent recurrence. It is a chronic and recurrent disease, hence secondary infection or PIH may occur in severe untreated cases **(Fig. 7)**.

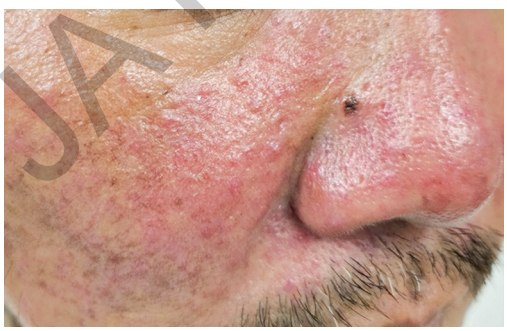

FIG. 6: Erythema and telangiectasias seen in rosacea.

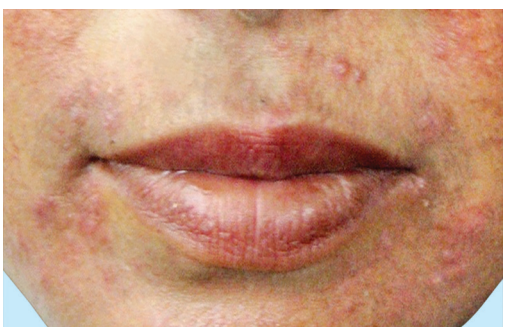

FIG. 7: Inflammatory erythematous papules seen in perioral dermatitis.

DRUG-INDUCED ACNEIFORM ERUPTIONS

Drug-induced acneiform eruptions are skin reactions that resemble acne vulgaris and are triggered by the use of medications. These eruptions are monomorphic lesions present as papules, pustules, and occasionally nodules on the face, chest, and back.[17] The pathogenesis involves a hypersensitivity reaction or direct irritation of the pilosebaceous unit by the offending drug. Treatment involves discontinuation of the offending medication whenever possible and initiation of appropriate acne treatment modalities, including topical or systemic antibiotics, retinoids, and benzoyl peroxide. Reevaluation of the patient's medication regimen and consideration of alternative therapies may be necessary to prevent recurrence of drug-induced acneiform eruptions. As a common adverse effect of certain medications, these eruptions usually resolve once the offending drug is discontinued and appropriate treatment is administered.

LUPUS MILIARIS DISSEMINATUS FACIEI

Lupus miliaris disseminatus faciei (LMDF) is a rare inflammatory skin condition that is characterized by multiple, symmetric, flesh-colored to reddish-brown papules and nodules mostly affecting the central face, cheeks, and forehead **(Table 2)**. LMDF is the result of a granulomatous reaction to an unknown antigenic trigger.[18] Treatment options are often limited and may give inconsistent results. Therapies such as topical corticosteroids, calcineurin inhibitors, oral tetracyclines, isotretinoin, and intralesional corticosteroid injections have been used with varying success. Despite these available treatments, LMDF may persist for years, though spontaneous regression without intervention is also a possibility.

NEVUS COMEDONICUS

Nevus comedonicus is a rare congenital hamartoma of the pilosebaceous unit. It is characterized by the presence of grouped, dilated follicular openings resembling comedones **(Table 2)**. It arises from a developmental anomaly during embryogenesis.[19] Treatment options for nevus comedonicus are often limited and may yield unsatisfactory results. Surgical excision, laser therapy, and dermabrasion have been used with varying success, but the condition can persist indefinitely despite intervention. It may also be linked to other cutaneous or systemic abnormalities.

FAVRE–RACOUCHOT SYNDROME

Favre–Racouchot syndrome, also known as nodular elastosis with cysts and comedones, is a rare dermatologic condition characterized by extensive solar elastosis, cystic comedones, and telangiectasias, primarily affecting sun-exposed areas of the face, particularly the periorbital and perioral regions **(Table 2)**. Favre–Racouchot syndrome is a result of chronic sun exposure and photodamage in genetically predisposed individuals.[20] Treatment options are limited and often unsatisfactory. Surgical excision, lasers, and dermabrasion have been tried with varied results. Favre–Racouchot syndrome can persist despite treatment and may be linked to various cutaneous or ocular abnormalities. In severe cases, secondary infections, scarring, or cosmetic disfigurement may arise **(Fig. 8)**.

SYRINGOMA

Syringoma is a benign adnexal tumor derived from eccrine sweat ducts, typically presenting as small, firm, skin-colored to yellowish papules, predominantly located on the lower eyelids and periorbital area **(Table 2)**. Hyperplasia of the eccrine ductal epithelium is the cause for underlying the development

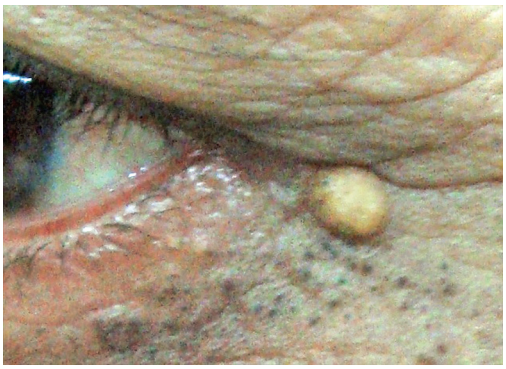

FIG. 8: Favre–Racouchot syndrome.

of syringoma.[21] Treatment armamentarium includes electrosurgery, lasers, cryotherapy, or surgical excision yielding variable results. Syringomas are benign, but they may persist indefinitely or recur over time.

TRICHOEPITHELIOMA

Trichoepithelioma is a rare benign adnexal tumor derived from hair follicle epithelium, presents as small, firm, skin-colored to pink papules or nodules, predominantly on the face, scalp, and neck **(Table 2)**. Trichoepithelioma is due to abnormal differentiation of the hair follicle epithelium.[22] Treatment will be conservative, or surgical excision being the preferred choice. Electrosurgery, cryotherapy, and lasers may be considered for smaller lesions. Trichoepitheliomas may recur, particularly if incompletely excised. They are otherwise benign and do not typically pose a health risk **(Fig. 9)**.

ADENOMA SEBACEUM

Adenoma sebaceum, also known as facial angiofibromas, is a characteristic cutaneous manifestation of tuberous sclerosis complex (TSC), a genetic disorder characterized by the development of benign tumors in multiple organs.[23] Adenoma sebaceum is related to the loss of function mutations in the *TSC1* or *TSC2* genes, leading to dysregulated mammalian target of rapamycin (mTOR) signaling and abnormal proliferation of cells in the skin. It clinically presents as multiple, small, reddish to flesh-colored papules or nodules symmetrically distributed over central face, nasolabial folds, cheeks, and chin **(Table 2)**. Treatment alternatives for adenoma sebaceum are limited and primarily aimed at cosmetic improvement. Electrocautery, lasers, cryotherapy, and surgical excision may be considered for symptomatic or cosmetically disfiguring lesions. Regardless of treatment, adenoma sebaceum may reoccur or persist indefinitely. Aggressive or inappropriate management can lead to post-procedure sequelae **(Fig. 10)**.

CONCLUSION

Understanding the various acne mimickers is crucial for their accurate diagnosis and appropriate management. While acne vulgaris is a common dermatological condition, numerous other dermatoses can present with similar clinical features, which pose diagnostic challenges for healthcare providers. By familiarizing themselves

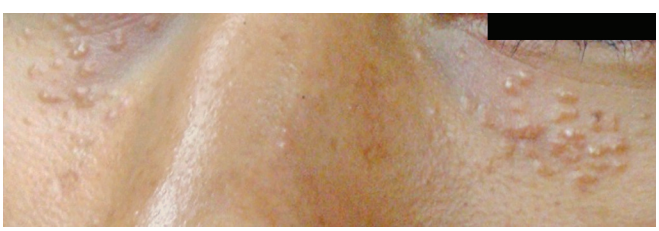

FIG. 9: Small skin-colored eruptions seen in trichoepithelioma.

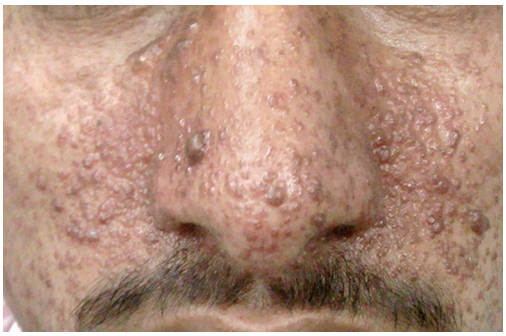

FIG. 10: Numerous, small, reddish and flesh-colored papules seen in adenoma sebaceum.

with these mimickers, clinicians can enhance their diagnostic acumen and avoid misdiagnosis, thus providing more effective patient care. Furthermore, recognizing acne mimickers underscores the importance of a comprehensive patient evaluation, including thorough history-taking, physical examination, and, when necessary, ancillary investigations. Patient education plays a vital role in managing expectations and ensuring compliance with treatment regimens. Overall, by adopting a systematic approach and remaining vigilant for subtle clinical clues, clinicians can navigate the complexities of acne mimickers with confidence, ultimately improving outcomes and patient satisfaction.

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Printed in India

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ISBN 978-93-6616-304-8