

Acne & Rosacea



Presented by :
Raghad Abu Khalaf
Bayan Mahmoud
Haneen Azzeh

Supervised by :
Dr. Leen Al Huneafat

Primary Lesion	Description
Macule	<ul style="list-style-type: none"> • A flat (nonpalpable) skin lesion ≤ 1 cm in size that differs in color from surrounding skin
Patch (dermatology)	<ul style="list-style-type: none"> • A flat skin lesion > 1 cm in size that differs in color from surrounding skin
Papule	<ul style="list-style-type: none"> • A small, palpable skin lesion ≤ 1 cm in diameter
Nodule (dermatology)	<ul style="list-style-type: none"> • An elevated lesion, > 1 cm in both diameter and depth
Plaque (dermatology)	<ul style="list-style-type: none"> • Palpable, usually raised lesion > 1 cm 
Vesicle (dermatology)	<ul style="list-style-type: none"> • Small fluid-containing blister (collection of fluid in the skin) ≤ 1 cm in diameter
Bulla	<ul style="list-style-type: none"> • Large fluid-containing <u>blister</u> > 1 cm in diameter
Urticaria (hives)	<ul style="list-style-type: none"> • Sharply demarcated lesions on edematous skin • Irregular borders • Transient (hours to days)
Pustule	<ul style="list-style-type: none"> • <u>Vesicle</u> filled with pus

Primary lesions



Acne vulgaris

Vulgaris, a Latin adjective meaning **common**, or something that is derived from the masses of common people

- Most common cutaneous disorders in adolescents and young adults
- Common chronic (or recurrent) skin disease presenting with non- inflammatory and/or inflammatory lesions in pilosebaceous unit
- found in the face (most common) , neck , shoulder ,upper back and upper chest



pathogenesis

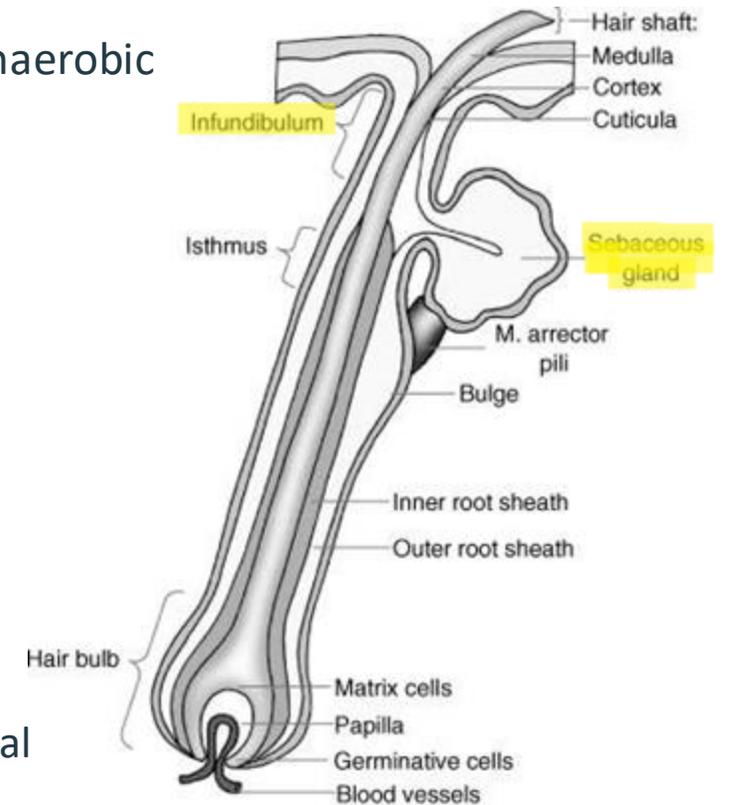
Propionibacterium acnes is a gram-positive human skin commensal that prefers anaerobic growth conditions present within in the pilosebaceous unit

Factors that induce the pathogenesis of Acne vulgaris

- Hormonal role , androgens , Testosterone , DHEAS
- Increased sebum production
- Hypercornification of the pilosebaceous duct (infundibulum)
- Role of *Propionibacterium acnes* - enzyme production (lipase)
- Family history – predisposition

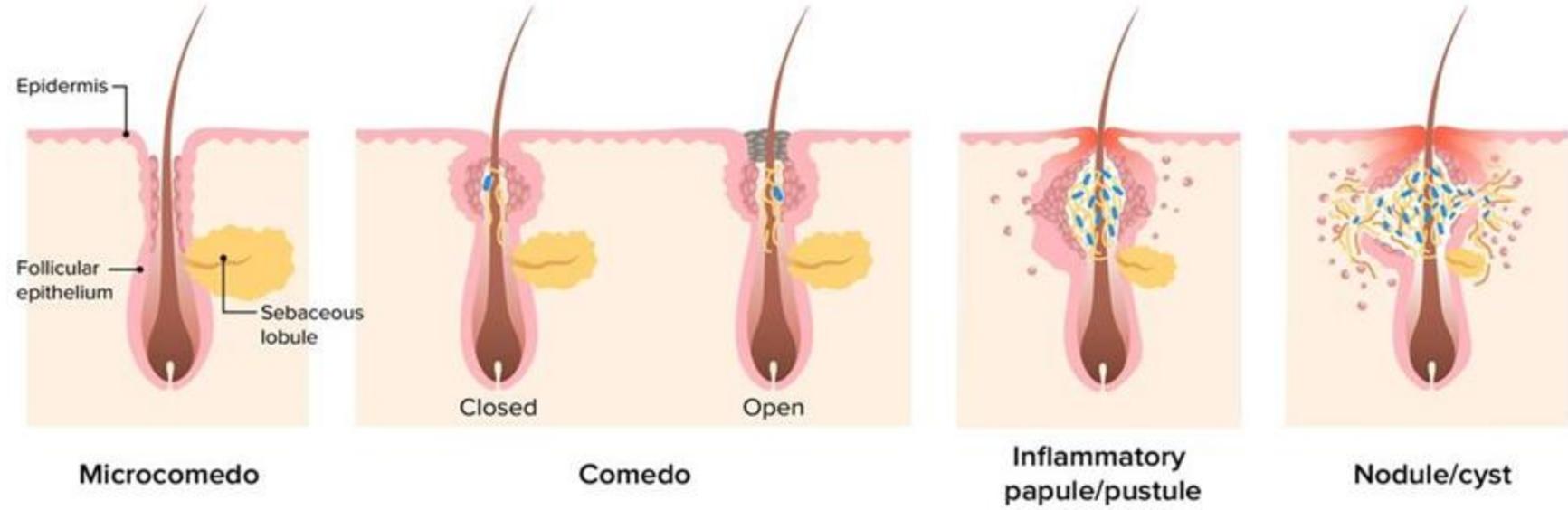
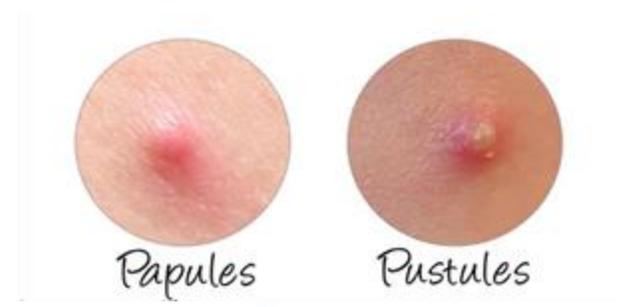
Primary lesion of acne vulgaris Comedon

Comedones : are small, white, or dark bumps that give skin a rough texture. → are essential and characteristic for acne diagnosis



Evolution of acne

- Non inflammatory lesion (Comedones) → inflammatory lesion (Papule → Pustule → Nodule/Cyst) → Sequelae (Scar, hyperpigmentation, erythema)
- Acne must be treated in its early stage to avoid those Sequelae.



Clinical features

1) Non inflammatory lesions (comedon)

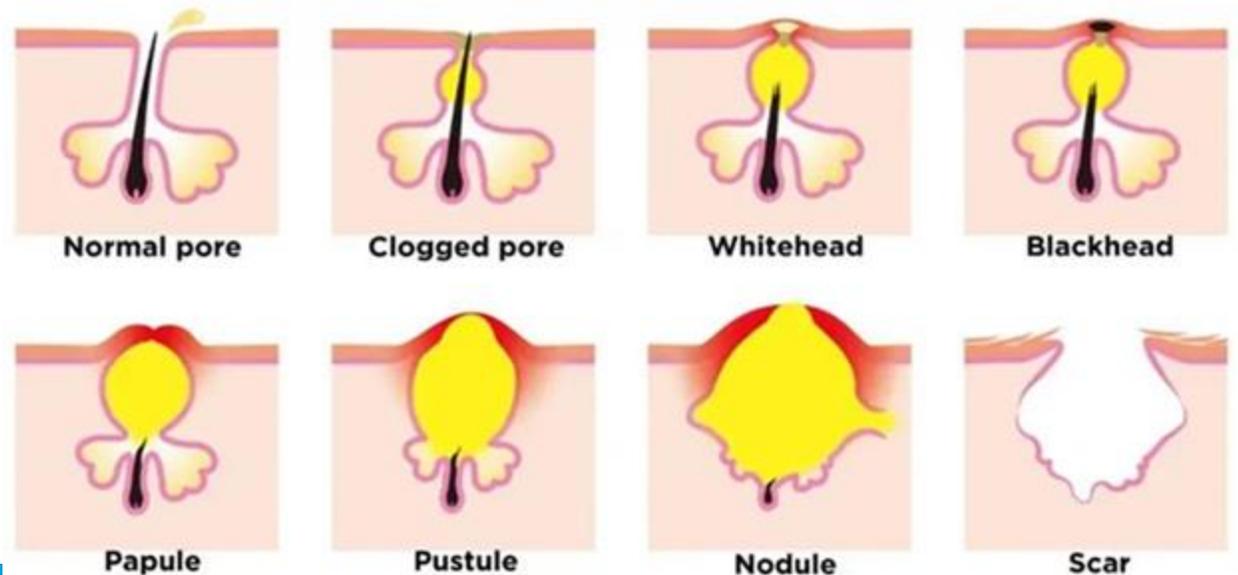
- White head comedon (closed comedon) , better appreciated by palpation
- Black head comedon (open comedon) Melanin deposition or oxidation of lipids are responsible for black coloration

2) Inflammatory lesions (acne)

- papules
- pustules
- nodules
- cysts

3) Sequelae : -scars

- Hyperpigmentation
- erythema



INFLAMMATORY ACNE



PUSTULES



PAPULES

NODULOCYSTIC ACNE

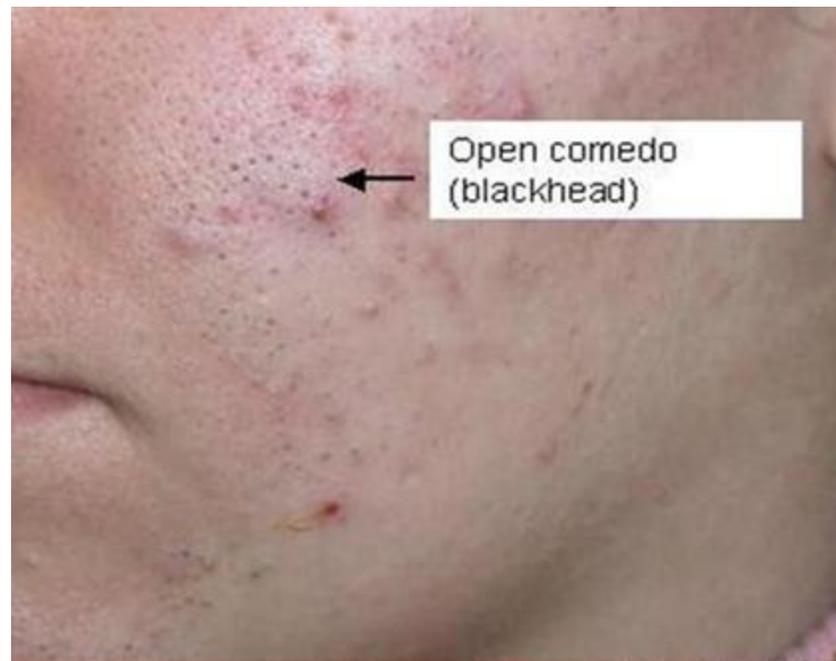
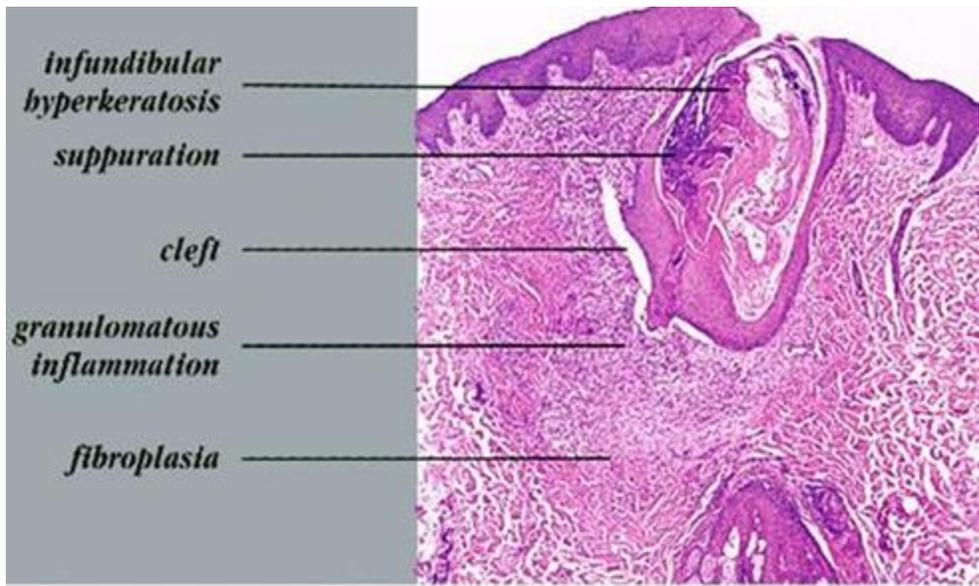


CYSTS



NODULES







Acne variants

1. Acne vulgaris.
2. Acne conglobata (Nodulocystic).
1. Acne fulminans.
2. Acne mechanica.
3. Acne excoriee.
6. Drug induced acne.
7. Occupational acne.
8. Neonatal acne.
9. Infantile acne.
10. Late onset acne (adult type).

2. Acne conglobata-Nodulocystic acne (severe)



2-ACNE CONGLOBATA

~ NODULOCYSTIC ACNE

NO SYSTEMIC MANIFESTATIONS

PART OF TETRAD

4

2.DISSECTING CELLULITIS OF THE SCALP

3.HIDRADENITIS SUPPURATIVA

4.PILONIDAL SINUS



3. Acne fulminans



FIGURE 1: Acne fulminans. Hemorrhagic ulcerations with purulent crust scattered on the back and neck

- Most severe form with cystic lesions and systemic symptoms
- Rare form
- Young men 13-16 yr.

Systemic symptoms

- Osteolytic bone lesions
- Fever , arthralgia , hepatosplenomegaly
- Increased ESR , leukocytosis
- Treatment Isotretinoin with systemic steroids

4. Acne mechanica

-Acne mechanica is a type of acne which occurs as a result of constant or repeated friction and pressure against the skin. The breakouts can happen when the skin is rubbed, stretched or wrapped too tightly.

- Rubbing by helmets , chin straps
- Treatment by eliminating these factors
- Yellowish discoloration indicates secondary infections.



5. Acne excoriee

- Young women
- The picked lesions become scarred and infected, causing itching which leads to further picking. Sometimes the picking continues long after the original acne has healed
- Excoriations only. No comedones, papules or pustules
- high scarring tendency
- Underlying psychiatric components
- treatment : Antidepressants or psychotherapy may be indicated



6. Drug induced acne

- Anabolic steroids - danazole , stanazole
- Corticosteroids
- phenytoin
- Lithium
- Iodides , bromides , Vit.supplement , cough compounds and sedatives
- Azothioprine , Vit.B12, cyclosporine
- **Monomorphic eruption of papules and pustules**
- Steroid induced acne after oral or topical use of steroids



7. Occupational acne

- Exposure to insoluble , follicle - occlusion substances in the workplace
- Cutting oils , petrolatum - based products , coal tar
- **Comedones dominate usually**

Chloracne

- Kinds of occupational acne
- Exposure to chlorinated aromatic hydrocarbons
- Malar , retro-auricular , mandibular areas , axillae , sacrum , buttock are involved
- The causative agents found in :
electrical conductors , insulators , insecticides , fungicides and wood preservatives (poly chlor naphthalenes tetra chlor azoben zene and others



Neonatal Acne

- Hormonal factors from mother and **malassezia**
- 20% of healthy newborn
- Appears at the ages of **2 weeks** and resolves at the age of 3 months
- Small papules on **cheeks** .

- Treatment : **2% ketoconazole, Benzoyl Peroxide.**

- Papules and few comedones on the cheeks



Infantile Acne

- Hormonal factors DHEA.
- If acne present at 3-6months of age: infantile acne.
- More comedones than in neonatal.
- Resolves within 1-2 years.
- Treatment : Tretinoin , Benzoyl Peroxide



✓ Comedones , papules,erythema and hyperpigmentation.



✓ Comedones and papules.

8. Neonatal Acne & 9. Infantile Acne

8. Neonatal Acne	9. Infantile Acne
Hormonal factors from mother and Malassezia	Hormonal factors DHEA
Appears at the ages of 2 weeks	present at 3-6months of age
resolves at the age of 3 months	Resolves within 1-2 years
Small papules on cheeks	More comedones than in neonatal
Treatment: 2% ketoconazole, Benzoyl Peroxide	Treatment: Tretinoin, Benzoyl Peroxide

Late onset Acne (Adult acne)

- ✓ Papules , erythema and Hyperpigmentation .
- ✓ Must do investigations to rule out causes of androgen excess.
- ✓ Usually affect the jaw area and the neck



notice hirsutism indicating hyperandrogenism
other signs include male pattern hair loss

1. **Hyperandrogenism** should be suspected in female with ;
Hirsutism ,
irregular cycles , severe acne ,
abrupt onset , coarse voice.

2. **AM** serum cortisol
level if **hypercortisolism**
is suspected.

3. **Androgenetic alopecia** :
1.Free testosterone
2.DHEAS
3. 17-
hydroxyprogesterone.

Investigations for late onset acne:

4. Elevated DHEAS and 17-
OH-progesterone suggest
adrenal source of excess
androgen.

8. Serum testosterone
>200ng/dl indicates
ovarian tumor.

9. Ovarian US :
Ovarian cysts

6. Increased LH /FSH ratio to
> 2-3 in
polycystic ovary syndrome.

5. DHEAS 4000-8000ng/ml
or 17-OH progesterone level >
3ng/ml **congenital adrenal
hyperplasia**.

7. Elevated testosterone suggest
ovarian source.

Differential diagnosis of acne

1. Milia (small facial cysts)
2. Sebaceous hyperplasia (appear as papules)
3. Folliculitis
4. Pseudofolliculitis
5. Trichoepithelioma, syringoma
6. Seborrheic dermatitis
7. Rosacea
8. Perioral dermatitis



Treatment of Acne

Mild cases like comedone

Topical treatment:

- Vit.A derivative;Retinoids(the best choice)
- Benzoyl peroxide
- Tretinoin
- Topical Niacinamide
- Azelaic acid 20%
- Adjunct/Optional:Salicylic acid

And AB if needed



Treatment of Acne

Moderate cases like papule & pustule

- Topical treatments
- And systemic treatments:
 - Oral AB like :
Tetracycline, Doxycycline,
Erythromycin, Azithromycin (macrolides).
 - if it is not response during 3-6m ; use isotretinoin



Sever cases like conglobata ,
scarring , nodulocystic

Oral Isotretinoin is considered the first-line treatment from the start.

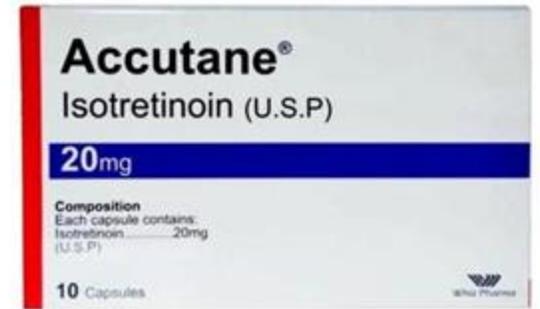


Overview of initial acne treatment by severity ^{[1][2][13]}

	First-line	Second-line 
Mild acne	<ul style="list-style-type: none"> • Topical treatment with any of the following: <ul style="list-style-type: none"> ◦ Benzoyl peroxide ◦ Retinoid  ^[2] ◦ Combination topical therapy for acne <ul style="list-style-type: none"> ▪ Benzoyl peroxide PLUS topical antibiotic ▪ Benzoyl peroxide PLUS topical retinoid ▪ Combination of benzoyl peroxide, topical antibiotic, and topical retinoid 	<ul style="list-style-type: none"> • Change to a different preferred medication.  • Try either of the following topical treatments: <ul style="list-style-type: none"> ◦ Azelaic acid ^{[1][13]} ◦ Clascoterone ^[13] ◦ Salicylic acid ^[1]
Moderate acne	<ul style="list-style-type: none"> • Combination topical therapy for acne • OR a combination of: <ul style="list-style-type: none"> ◦ Oral antibiotic for acne  ^[2] ◦ AND topical: <ul style="list-style-type: none"> ▪ Retinoid ▪ Benzoyl peroxide ▪ PLUS antibiotic if needed 	<ul style="list-style-type: none"> • Trial a different oral antibiotic or combination topical therapy. • Female patients: Consider hormonal therapy for acne. • Consider oral isotretinoin. 
Severe acne	<ul style="list-style-type: none"> • Oral isotretinoin (preferred) • OR oral antibiotic for acne PLUS combination topical therapy for acne 	<ul style="list-style-type: none"> • Trial a different oral antibiotic. • Female patients: Consider hormonal therapy for acne.

Isotretinoin (Roaccutane)

- Effective but toxic.
- Mechanism : **sebaceous gland Atrophy**
- **Teratogenic**– cause fetal anomaly in > 95% of cases (abortion or fetal anomalies).
- Needs close follow up (liver enzymes , serum lipids , bleeding , papilledema).
- Dose **0,5-1mg\kg** , used alone without any combination with other drugs. (like tetracycline that cause increase ICP)
- Duration 5-6 months or total accumulative dose **120mg\kg\course**.



combination of systemic antibiotics with oral isotretinoin can increase the risk of **intracranial hypertension**

Isotretinoin (Roaccutane)

❖ For severe cases :

1. Nodulocystic acne not responding to first line measurements
2. Scarring acne
3. Dysmorphophobic acne
4. Gram negative folliculitis

❖ Sides effect:

1. Dryness of skin and mucus membrane MC
2. Hepatotoxicity
3. Teratogenicity
4. Depression lead to suicide
5. Increase ICP



BEFORE



AFTER



First line treatment of each of the following cases



Oral antibiotic, topical benzoyl peroxide and topical retinoids



Oral isotretinoin

A 27-year-old married female presented with these lesions

- ❖ Which drug shouldn't be used for her case
 - Oral Isotretinoin
- ❖ Because she is married and might want to get pregnant, also the question and the picture didn't show any of the indications for using roaccutane (isotretinoin) (scarring, failure of medical therapy,...)



Rosacea



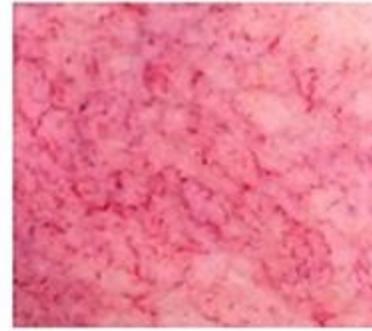
- a chronic inflammatory disease of the face(usually on the nose and cheeks), affects the pilosebaceous units and blood vessels and generally occurs in middle age,
- . It may also cause eye problems.
- characterised by persistent facial redness. It typically has a relapsing and remitting course
 - Rosacea symptoms can come and go. They might flare up for a few weeks, fade, and then come back.
- The cause of rosacea is unknown.
- Rosacea is a common, non-contagious skin inflammation.



People who are at increased risk of rosacea:

- Are female
 - Are fair-skinned
 - Are in their 30s to 50s
 - Have had ultraviolet radiation and/or heat exposure
 - Have a family history of rosacea
- 

- Characteristic skin lesions:
Telangiectasia, erythema,
papules, pustules on cheeks,
forehead, nose and chin; **no
comedones**
- in severe cases, phymatous
changes such as rhinophyma



Telangiectasia



Erythema



Flushing



Papules



Pustules



Erythematous papules on the cheeks.



Pink papules with Telangiectasia on the cheeks.



Bilateral pink papules on the cheeks, nose and chin.

Rosacea provoked by ?



COLD
WEATHER



SUNLIGHT



HEAT



WIND



SPICY FOODS



ALCOHOL



HOT DRINKS



CAFFEINE



SMOKING



CERTAIN
COSMETICS



STRESS



CERTAIN
MEDICINES



THE
MENOPAUSE



VIGOROUS
EXERCISE

Type of rosacea

Erythematotelangiectatic
Rosacea



Papulopustular Rosacea



Phymatous Rosacea

individuals with phymatous rosacea develop a related

condition called **rhinophyma**



Ocular Rosacea



Diagnosis of Rosacea

✿ Clinical evaluation ✿

Diagnosis of rosacea is based on the characteristic appearance; there are **no** specific diagnostic tests. The age of onset and absence of comedones help distinguish rosacea from acne.

Differential diagnosis of rosacea includes acne vulgaris, systemic lupus erythematosus, sarcoidosis, photodermatitis, and perioral dermatitis.

. **Treatment options for rosacea could include:**

- Medicines: There are several types of oral and topical medicines to treat bumps, pimples and redness caused by rosacea. Medicines help you manage your symptoms and reduce the number of flares.
 - (topical antibiotic)
- Laser treatment: Your provider can use [lasers](#) to remove visible blood vessels and limit the amount of redness on your skin.
- Surgical procedures: For severe cases, your provider might recommend surgery to correct nose disfigurement that can happen with rhinophyma.

Acneiform skin rash

1. pseudofolliculitis Barbae: Skin reaction to hair as foreign body.
2. Pityrosporum folliculitis
3. Acne keloidalis nuchae: inflammatory keloidal lesions on the nape of the neck

Pseudofolliculitis barbae

- Not a true folliculitis (not due to infection) but due to a reaction against the hair itself when its plugged inside (foreign body reaction)
- Occurs in Negroid people, Curley hair.



Pityrosporum folliculitis

Acne form rash due to fungal infection.



Acne keloidalis nuchae

Acne form rash with scarring on the nape of the neck, could lead to permanent hair loss.



Fair skin female, 40Y/O,
no other complaint

diagnosis ??

one topical treatment??

2 complication ??



الإخلاص هو الامتحان الأكبر،
والمجاهدة الأعظم،
والمؤمن وقَّافٌ مع نفسه، يحاسبها
أشدَّ محاسبة، ويلزمها الطاعة.