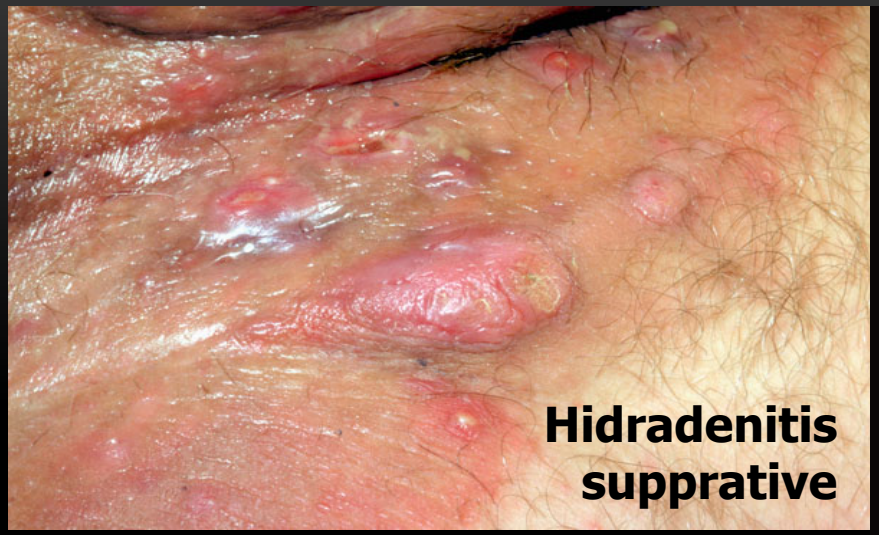
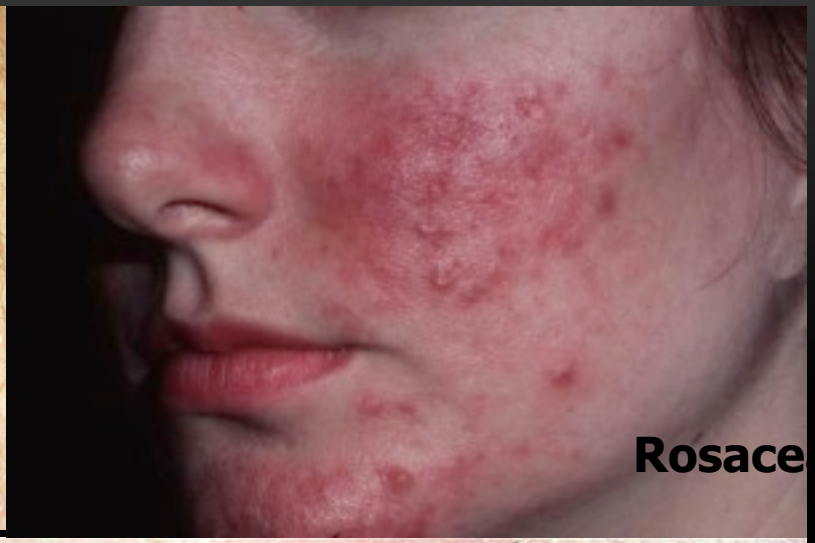
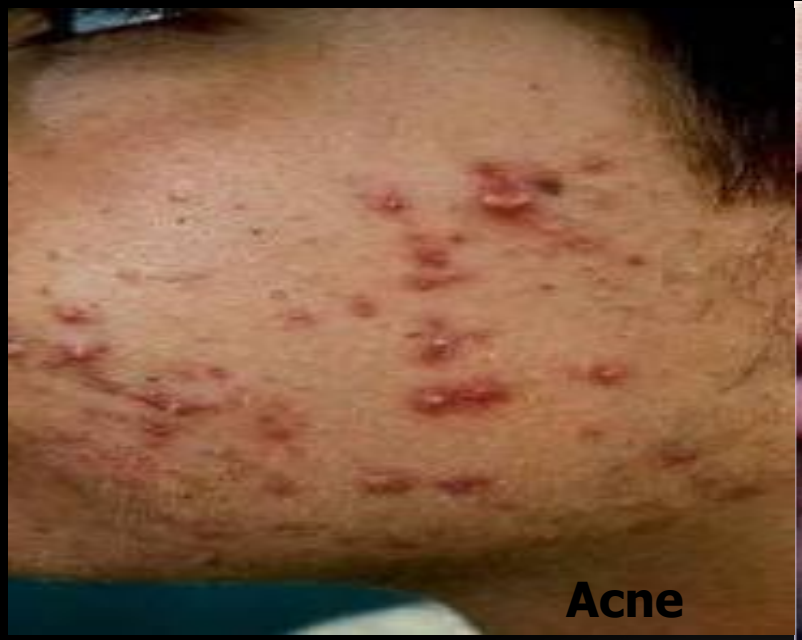
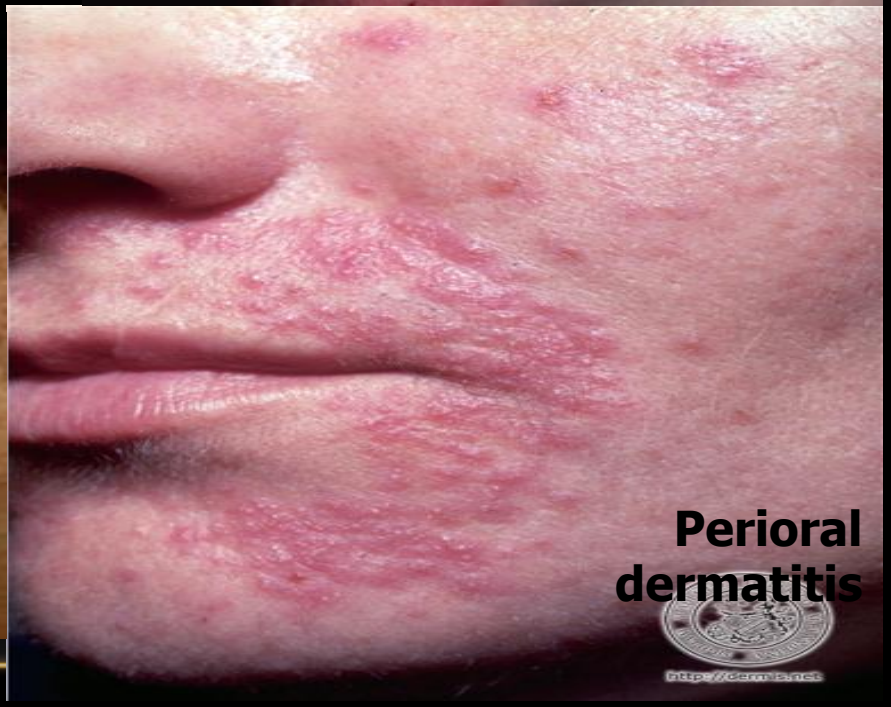
ACNE AND ACNIFORM ERUPTIONS


Hidradenitis
supprative


Rosace


Acne


Perioral
dermatitis

OBJECTIVE OF THE LECTURE

- To know the multiple pathogenetic mechanisms causing acne
- To recognize the clinical features of acne.
- To differentiate acne from other acniform eruptions such as rosacea.
- To prevent acne scars and treat acne efficiently.
- To recognize the clinical features of rosacea, it's variable types, differential diagnosis and treatment.
- To recognize the features of perioral dermatititis, differential diagnosis and treatment.
- To recognize the features of hidradenitis supprativa and treatment.

HISTORY OF ACNE

Acne is an old disease, the problem dated back to the pharaohs in the Egypt 4000 years ago.

ACNE VULGARIS

- Multifactorial disease of pilosebaceous unit.
- Affects both males and females.
- The most common dermatological disease.
- Mostly prevalent between 12-24 yrs.
- Affects 8% between 25-34, 4% between 35-44.

PATHOGENESIS:

- Ductal cornification and occlusion (micro-comedo).
- Increased sebum secretion (Seborrhoea).
- Ductal colonization with propioni bacterium acnes.
- Rupture of sebaceous gland and inflammation.

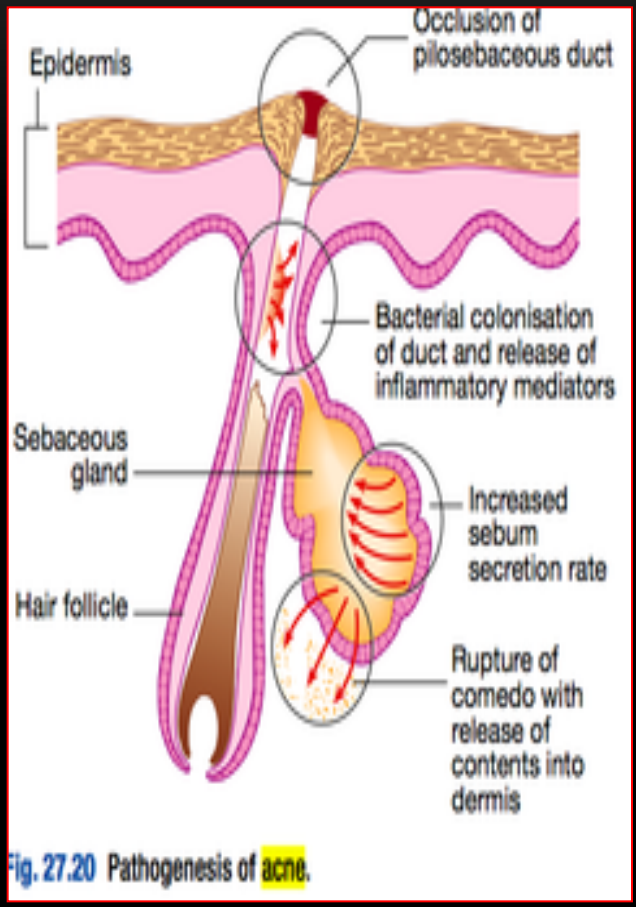


Fig. 27.20 Pathogenesis of acne.

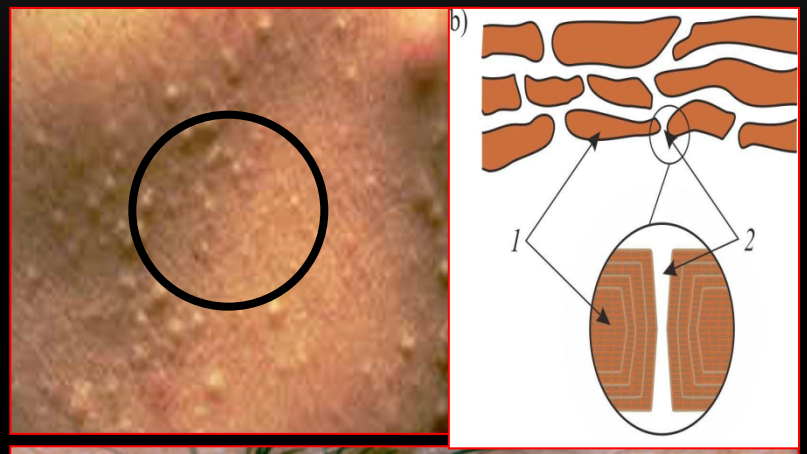
SPECIALIZED TERMS

Microcomedone:

Hyperkeratotic plug made of sebum and keratin in follicular canal.

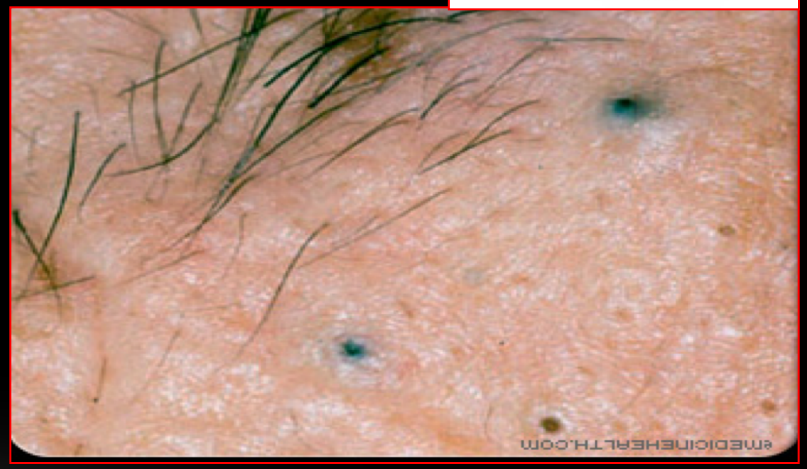
Closed Comedo (Whitehead):

Closed follicular orifice, accumulation of sebum and keratin



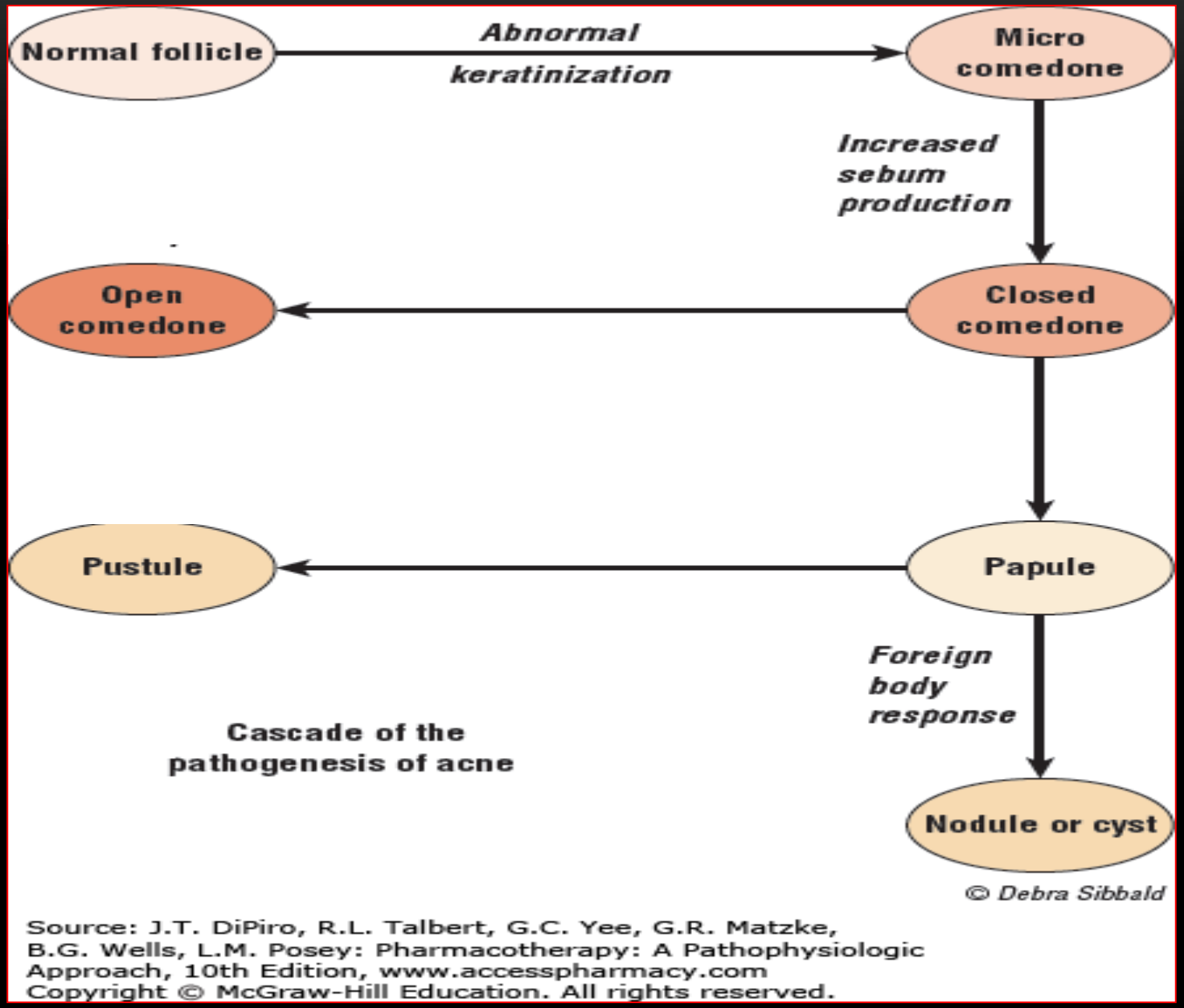
Open Comedo (Blackhead):

Opened follicular orifice packed with melanin and oxidized lipids



CLINICAL FEATURES

- Acne lesions are divided into:
- Inflammatory (papules,pustules,nodules,cyst)
- Non inflammatory (open, closed comedons).
- The comedons are the pathognomonic lesion
- Seborrhoea.
- Post inflammatory hyper pigmentation .
- Scarring (Atrophic or Hypertrophic).

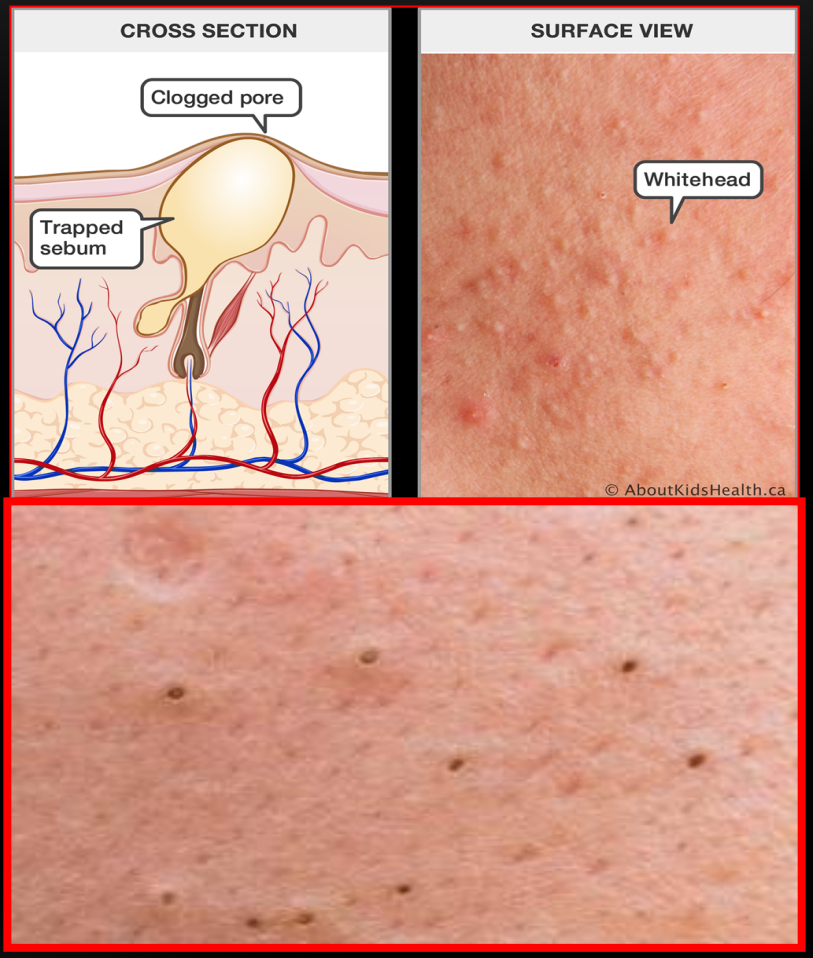


Cascade of the pathogenesis of acne

CLINICAL FEATURES

- Non inflammatory lesions

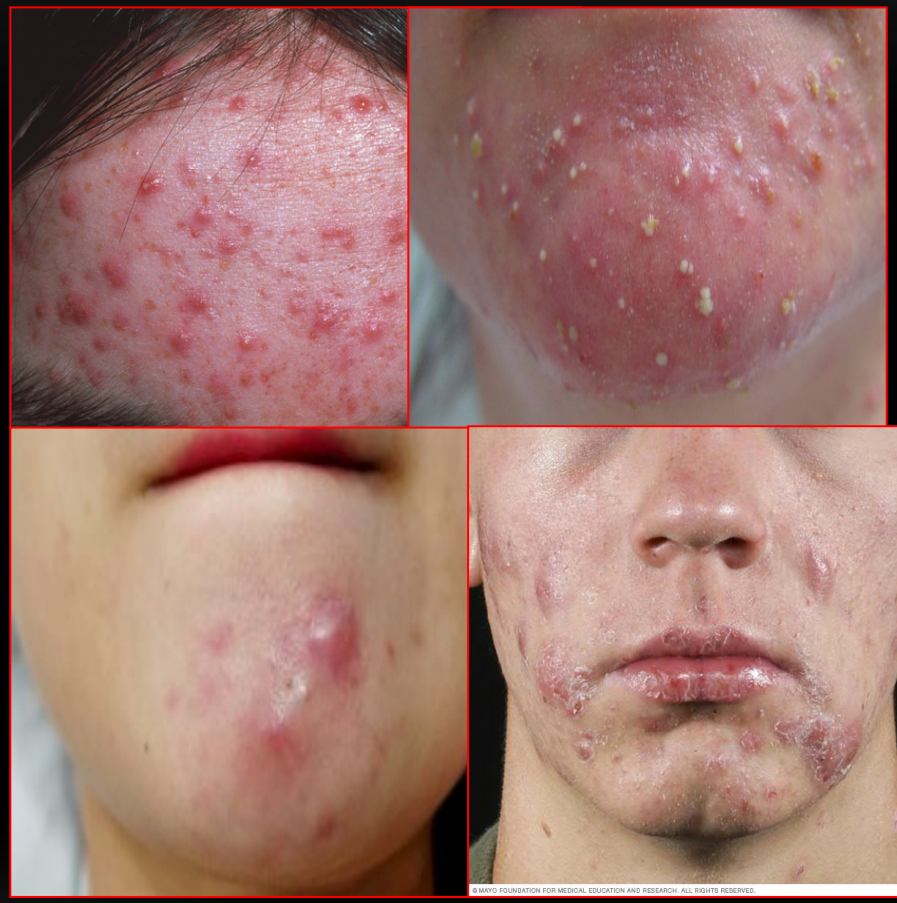
Closed and open comedones



CLINICAL FEATURES

When follicles rupture into surrounding tissues they result in inflammatory lesions:

- Papules.
- Pustules.
- Nodules.
- Cysts.



CLINICAL FEATURES

- Lesions predominate in sebaceous gland rich regions (face, upper back, chest & upper arms).

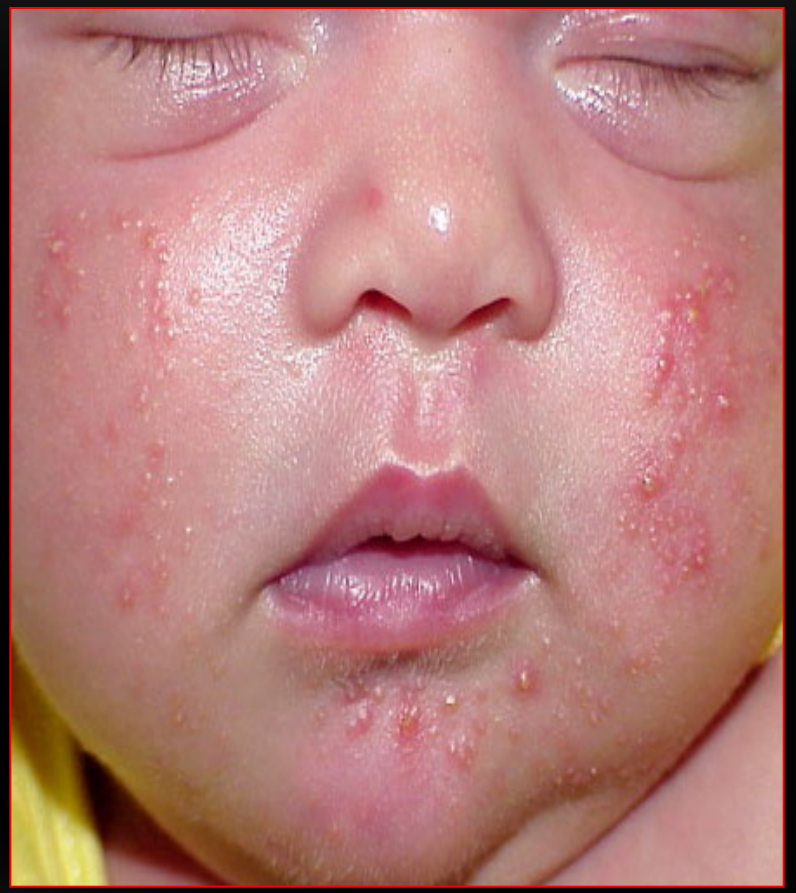
- The severity of acne ranges from mild, moderate , severe according to the predominant lesion.

- Comedon predominance is considered to be mild, while extensive papulopustules and nodules or cysts are considered severe.

ACNE SUBTYPES

1- Neonatal Acne:

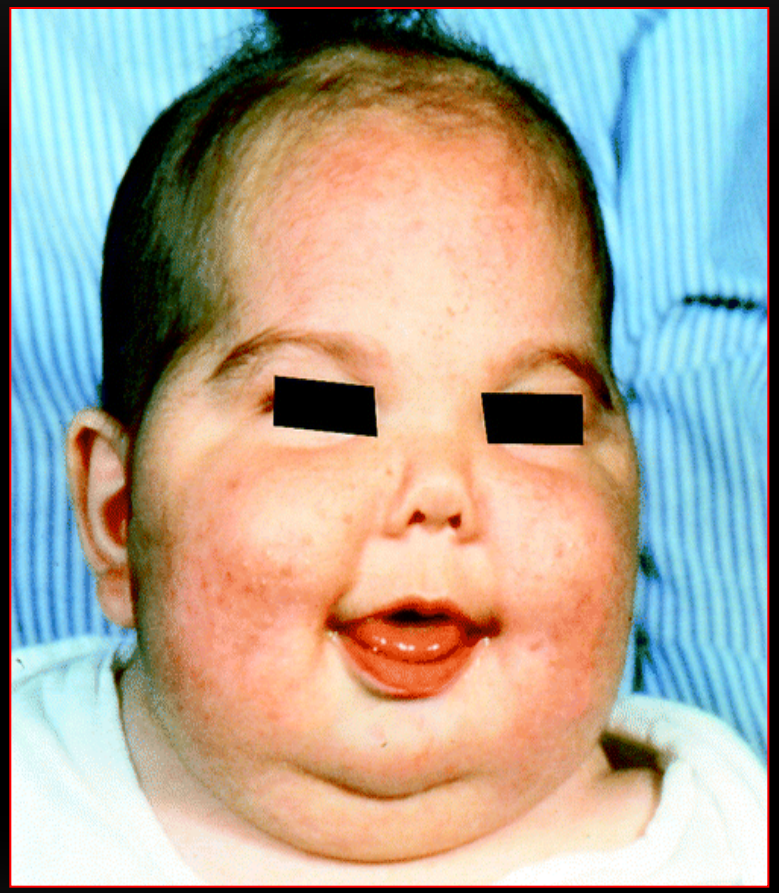
- Onset between 0-6 w of age.
- Characterized by closed comedons.
- Resolve spontaneously within 1-3 months.
- No relation with later development of acne.



ACNE SUBTYPES

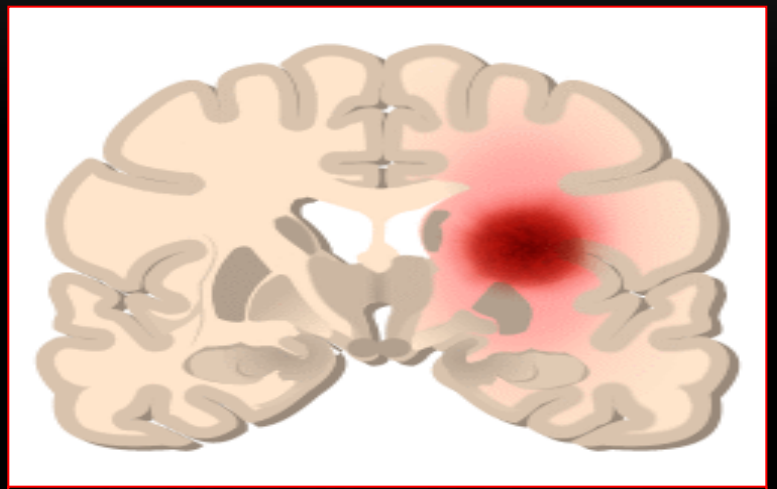
2- Infantile Acne:

- Onset between 3-6 m.
- Characterized by inflammatory lesions.
- Can be associated with precocious androgen secretion secondary to brain hamartoma and astrocytoma.



ACNE SUBTYPES

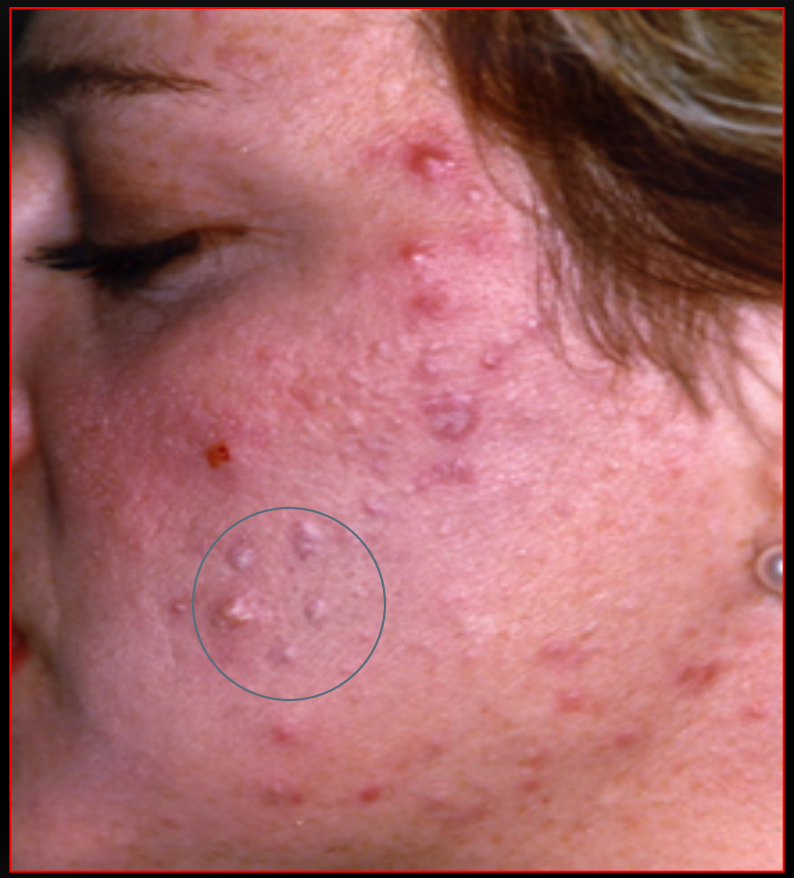
- Endocrinology examination (LH) and bone age is important.
- There is increased risk of development of severe acne later in life.



ACNE SUBTYPES

3-Teenage Acne:

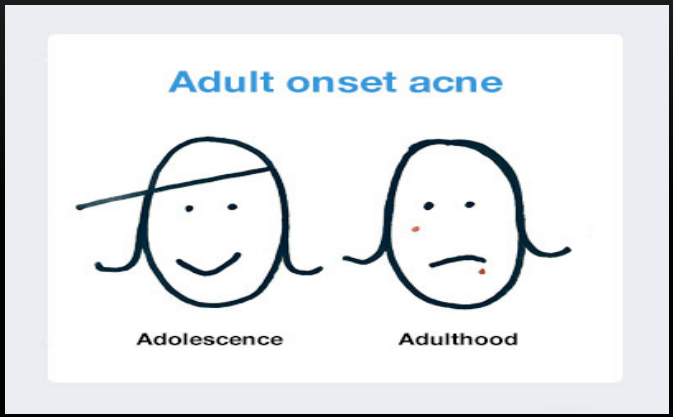
- More in boys.
- Mainly comedonal.
- May be the first sign of puberty.

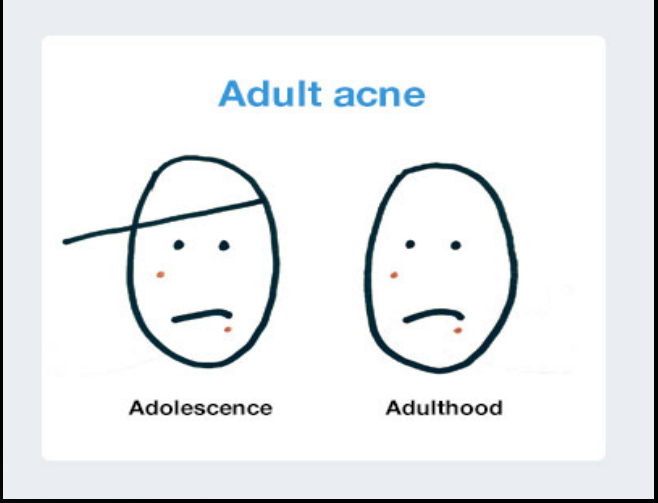


ACNE SUBTYPES

4- Adult Acne:

- Affects adults above 25 years.
- Can be continuation of teenage acne or start denovo.
- IF associated with hirsutism, irregular periods evaluate for hyper secretion of ovarian androgens (e.g. Polycystic ovary syndrome).

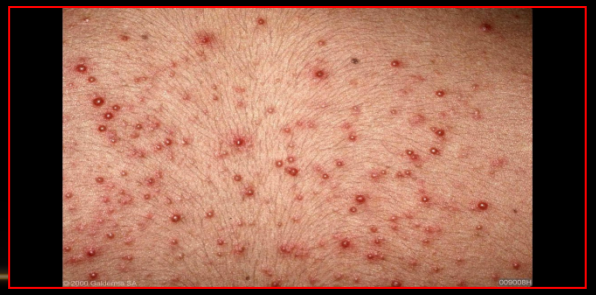




ACNE SUBTYPES

5- Drug Induced Acne:

- Steroids, Iodides, Bromides, INH, Lithium, Phenytoin, Epidermal growth factor inhibitors (cetuximab) cause acniform eruption.
- The characteristic feature of steroids acne is the absence of comedons and monomorphic lesions as small pustules and papules all looking alike

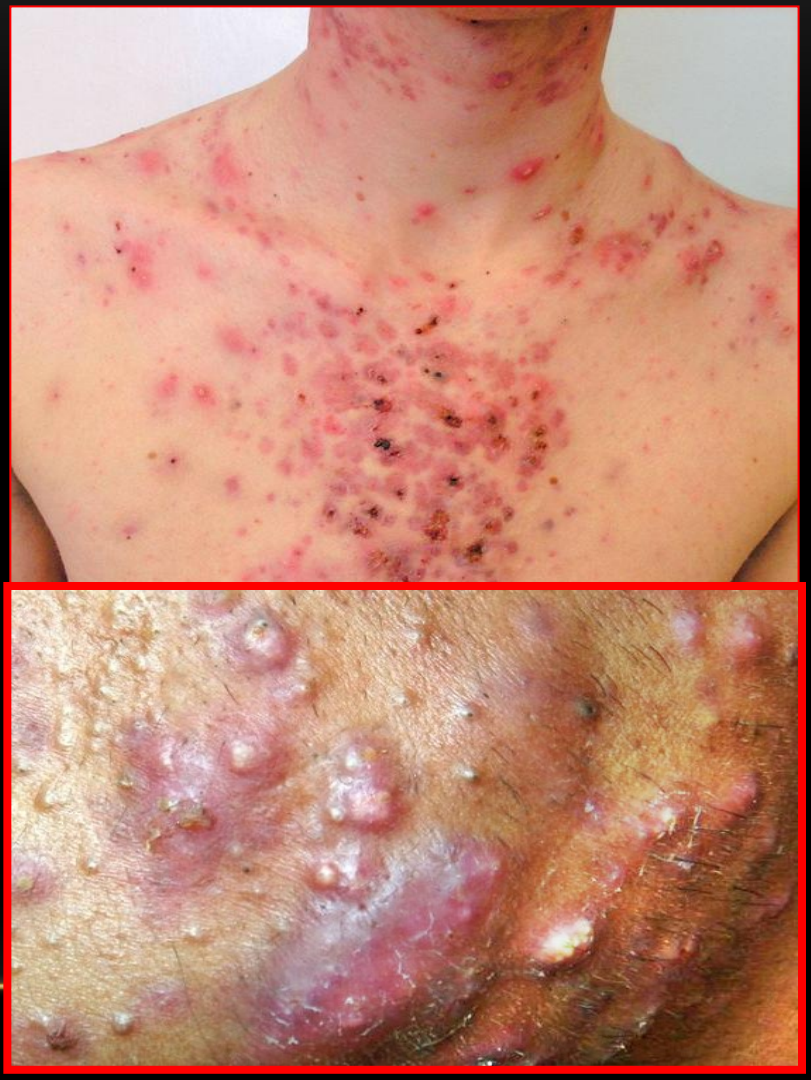


ACNE SUBTYPES

6- Acne Conglobata:

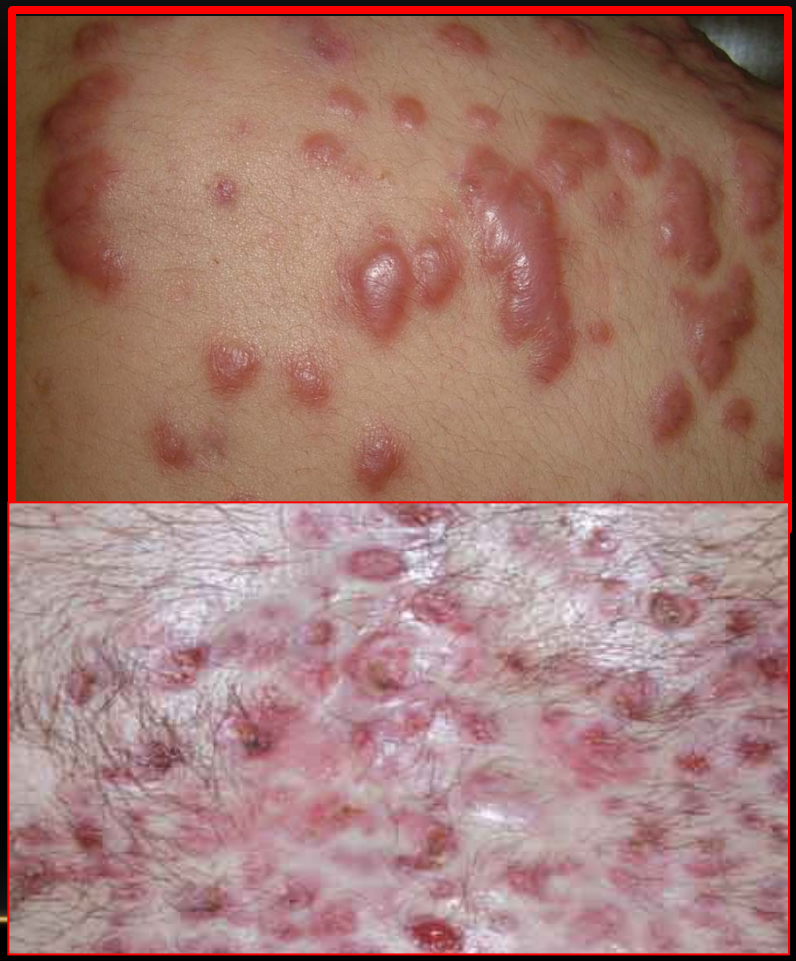
Highly inflammatory; with comedons, nodules abscesses, draining sinuses, over the back and chest .

Often persist for long periods.



ACNE SUBTYPES

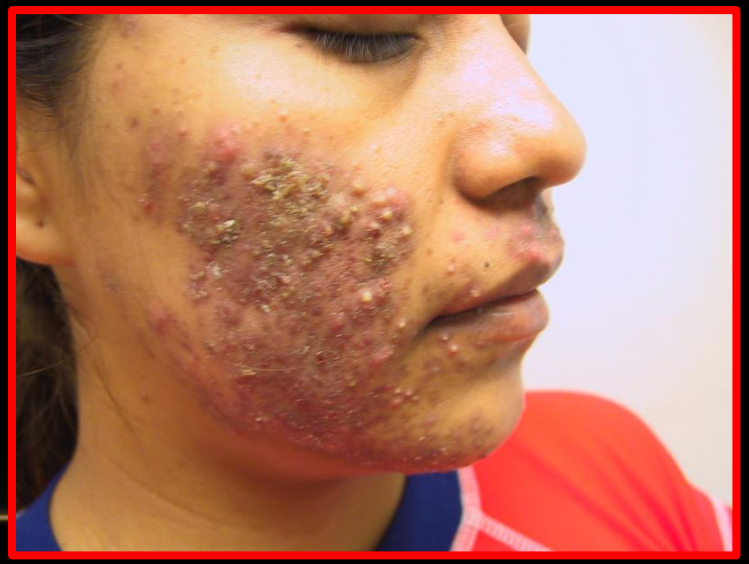
- Affect males in adult life (18-30 years).
- Heals with scars (Depressed or Keloidal).



ACNE SUBTYPES

7- Acne Fulminans

- Sudden massive inflammatory tender lesions with ulceration
- Heals with scaring.
- Associated with fever, increased ESR &CRP, polyarthralgia, leukocytosis .
- What are the risk factors?
- How would treat?



ACNE SUBTYPES

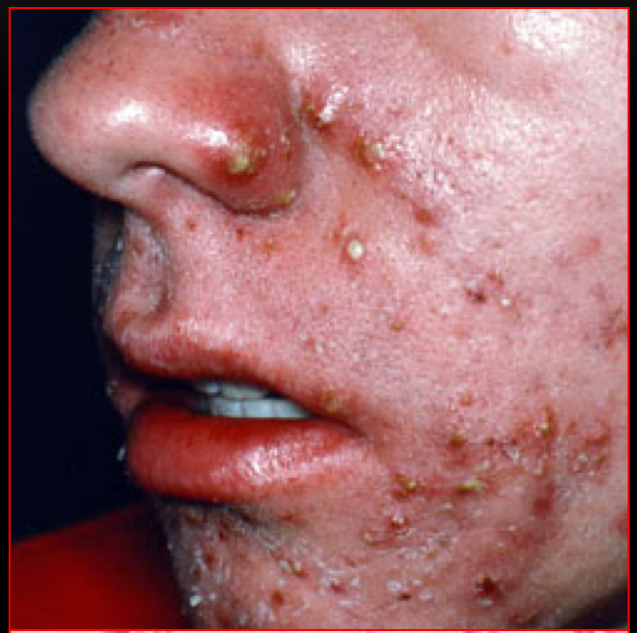
8- Occupational Acne:

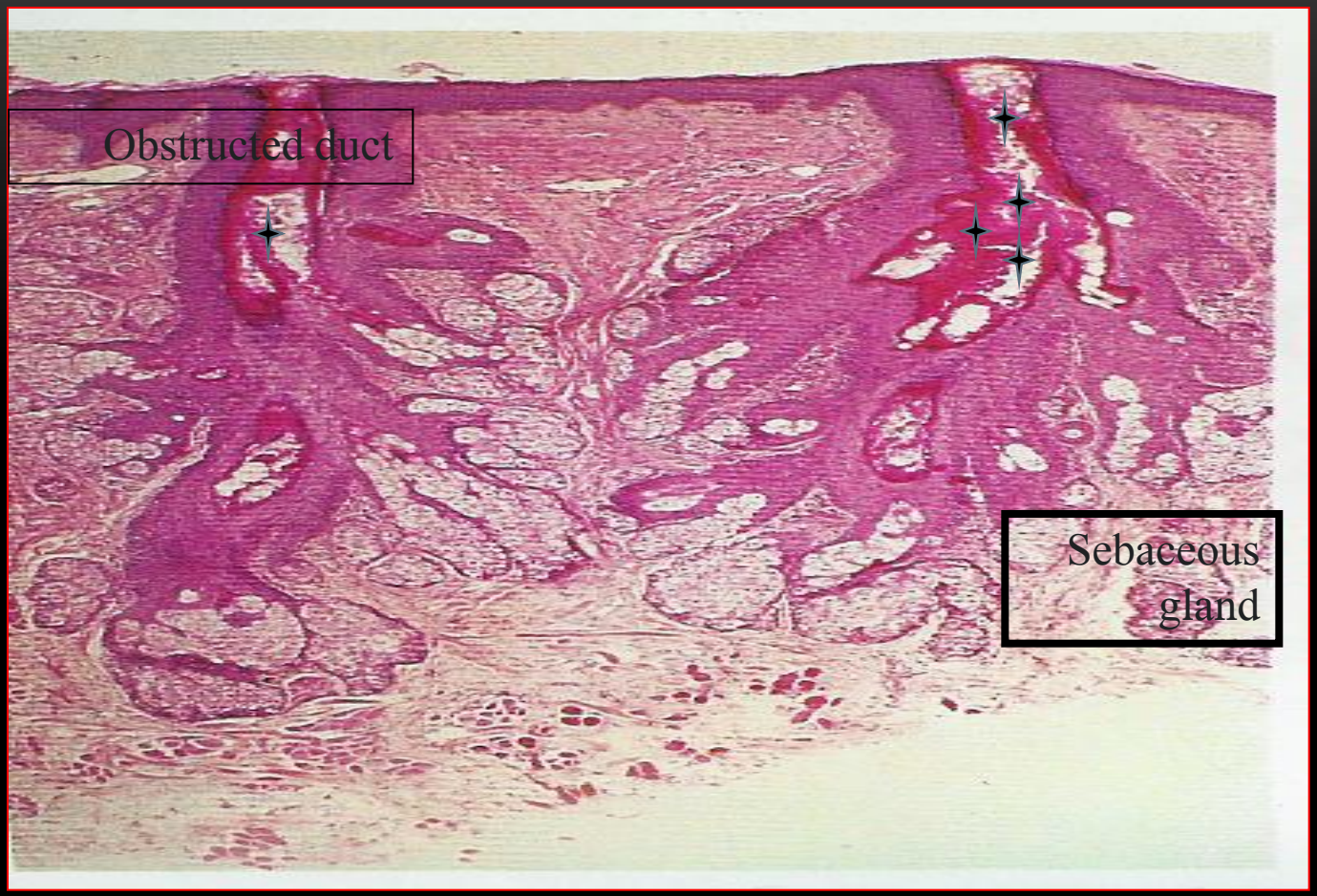
- Due to contact with oils – tars –chlorinated hydrocarbons used in the synthesis of insecticides and solvents.
- Lesions appear at site of contact including large comedons, papules, pustules, nodules.
- The most serious form is the chloracne due to systemic effect (liver damage –CNS involvement, decrease lung vital capacity).

ACNE SUBTYPES

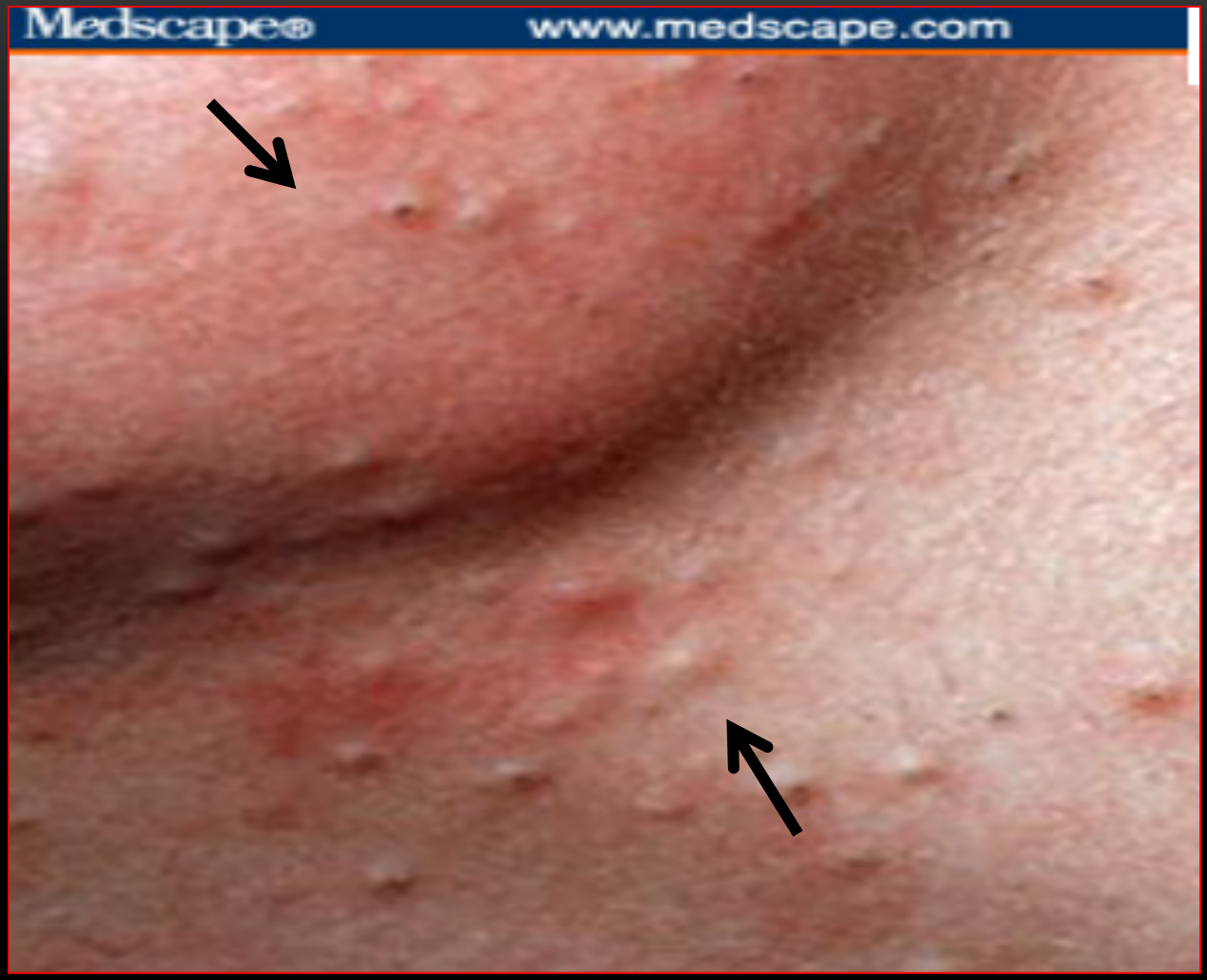
9- Gram NegativeFolliculitis:

- Infection with G –ve organisms (Klebsiella, proteus, E.coli).
- Seen in patients under chronic antibiotic acne treatments.
- Superficial pustules without comedons or even cysts involving from intranasal area to chin and cheeks.
- Response to ampicillin, Isotretenoin, TMP-SM.

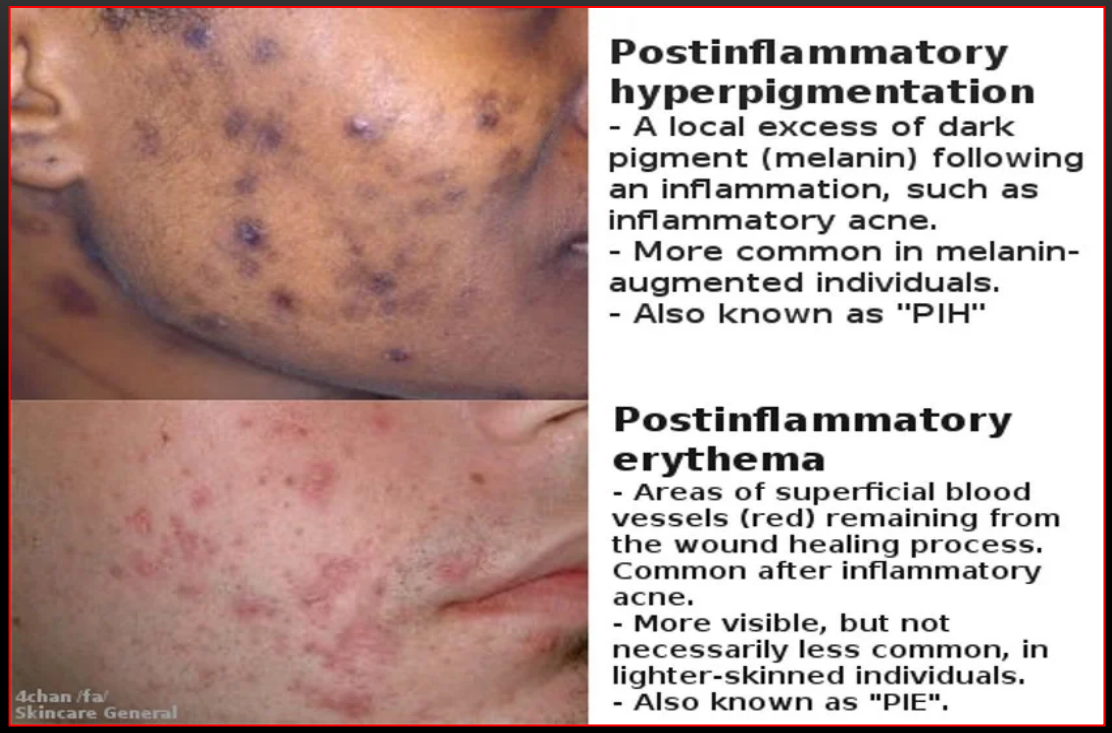




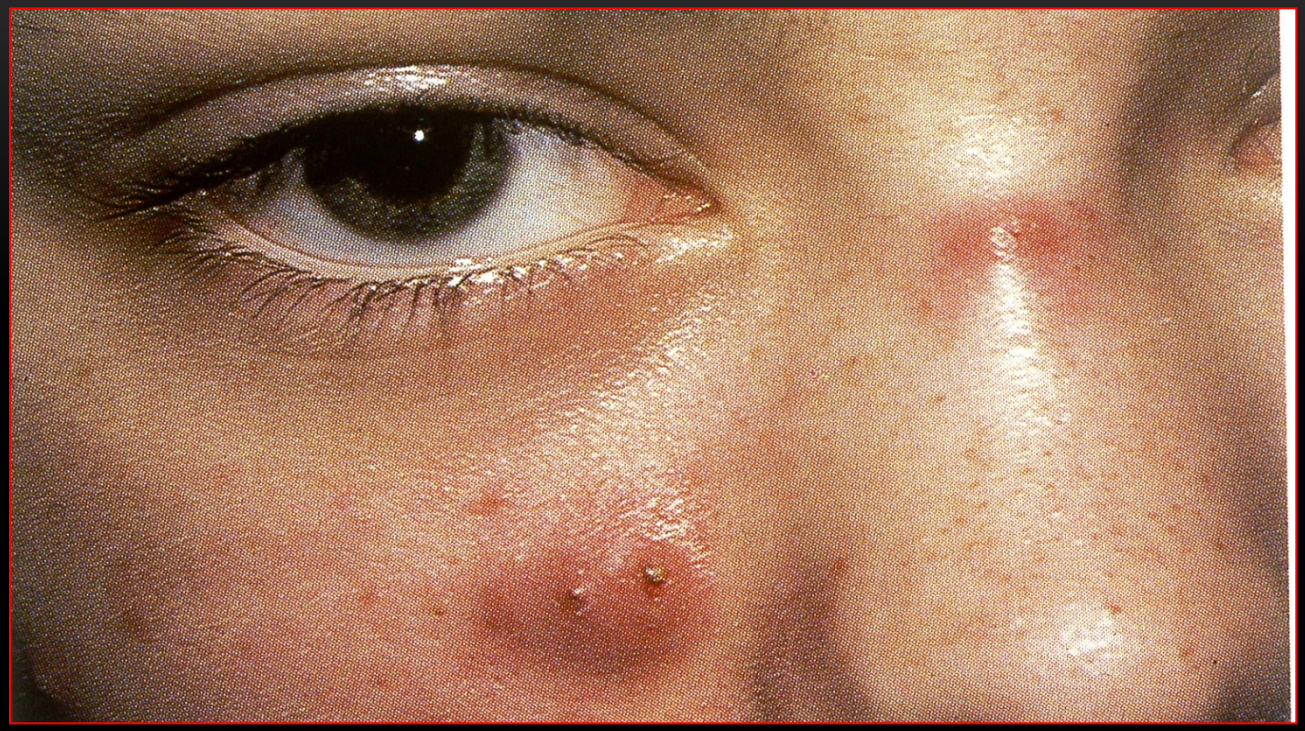
- Obstructed sebaceous duct



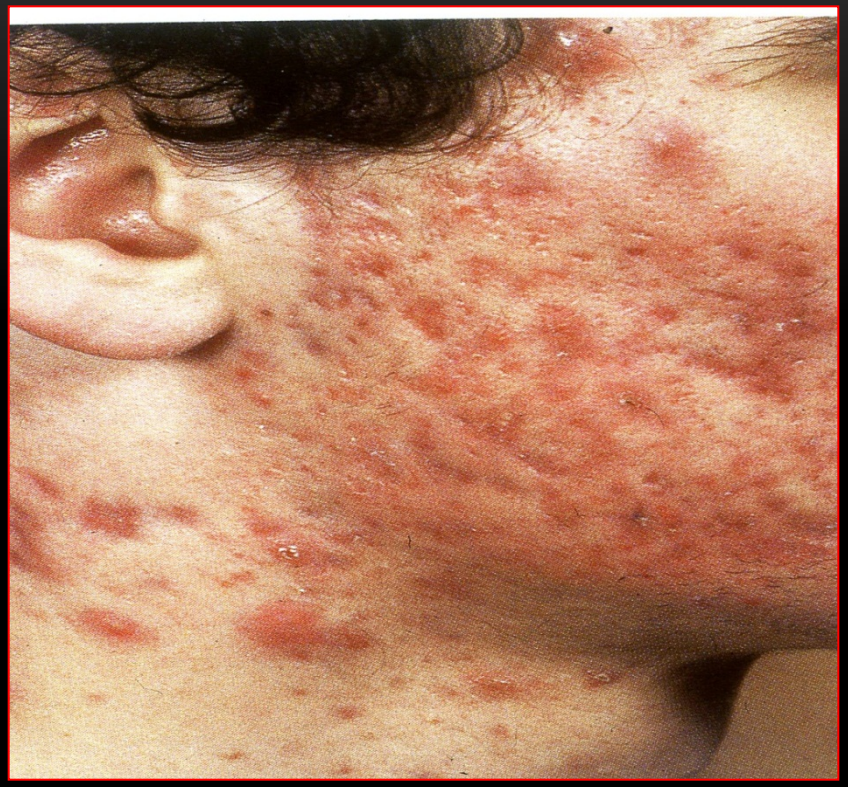
- Closed and open comedones



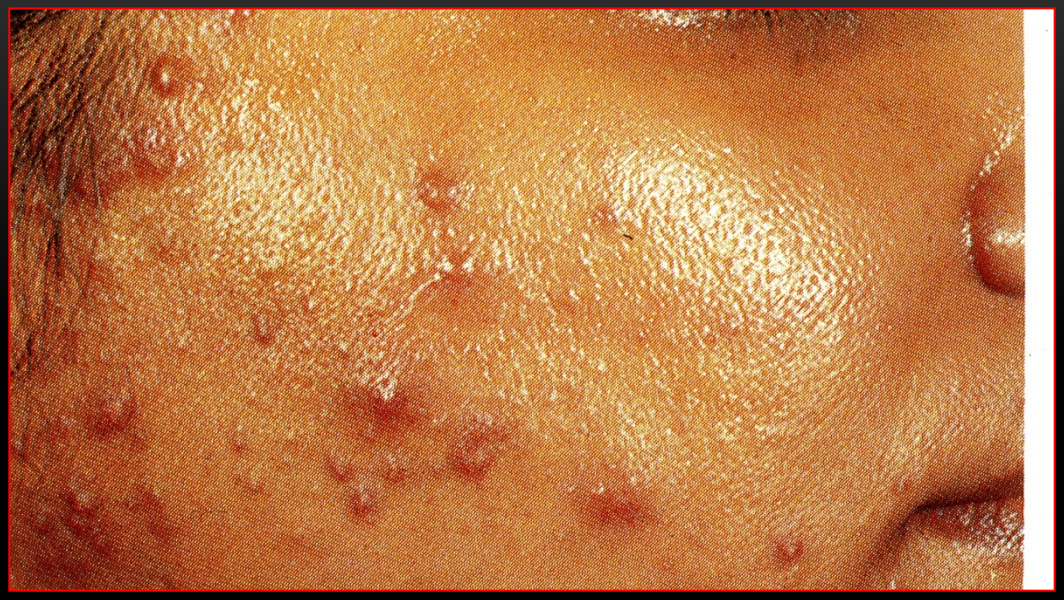
- Marked post inflammatory hyperpigmentation and erythema



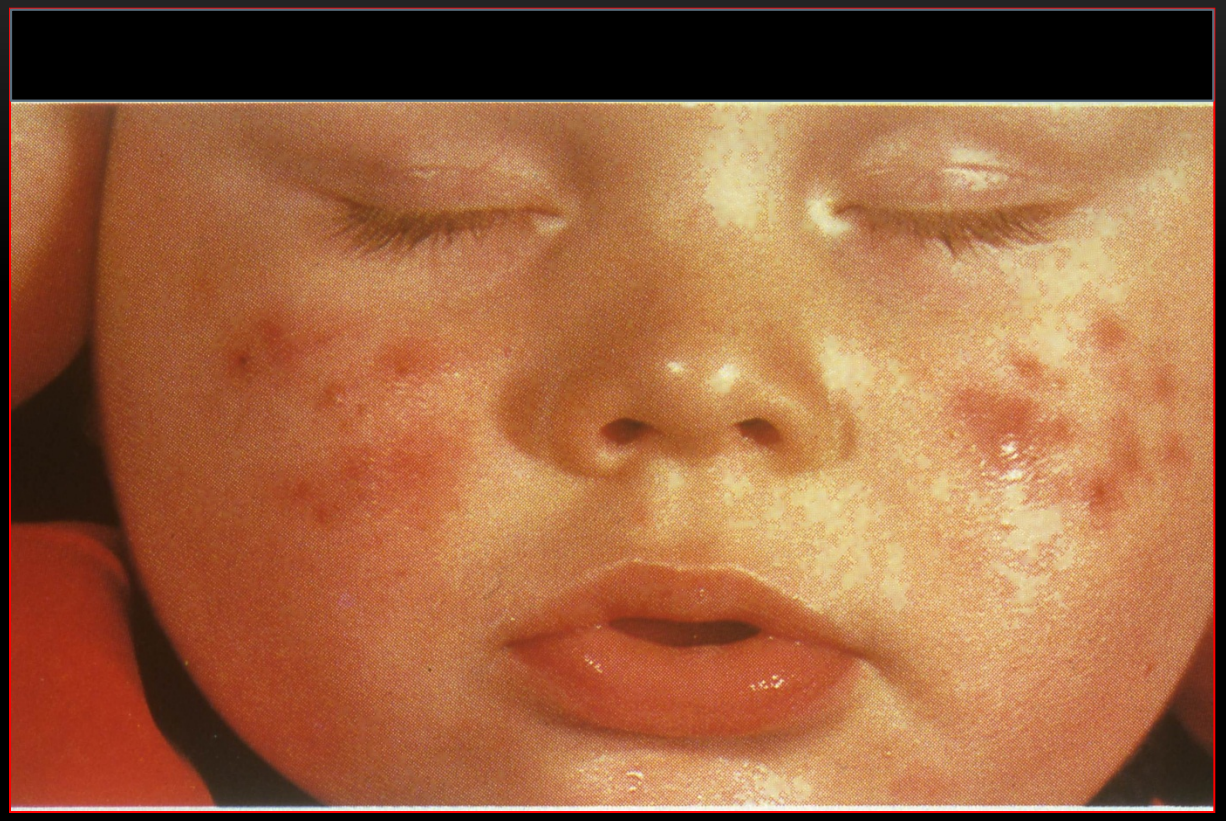
- Nodules



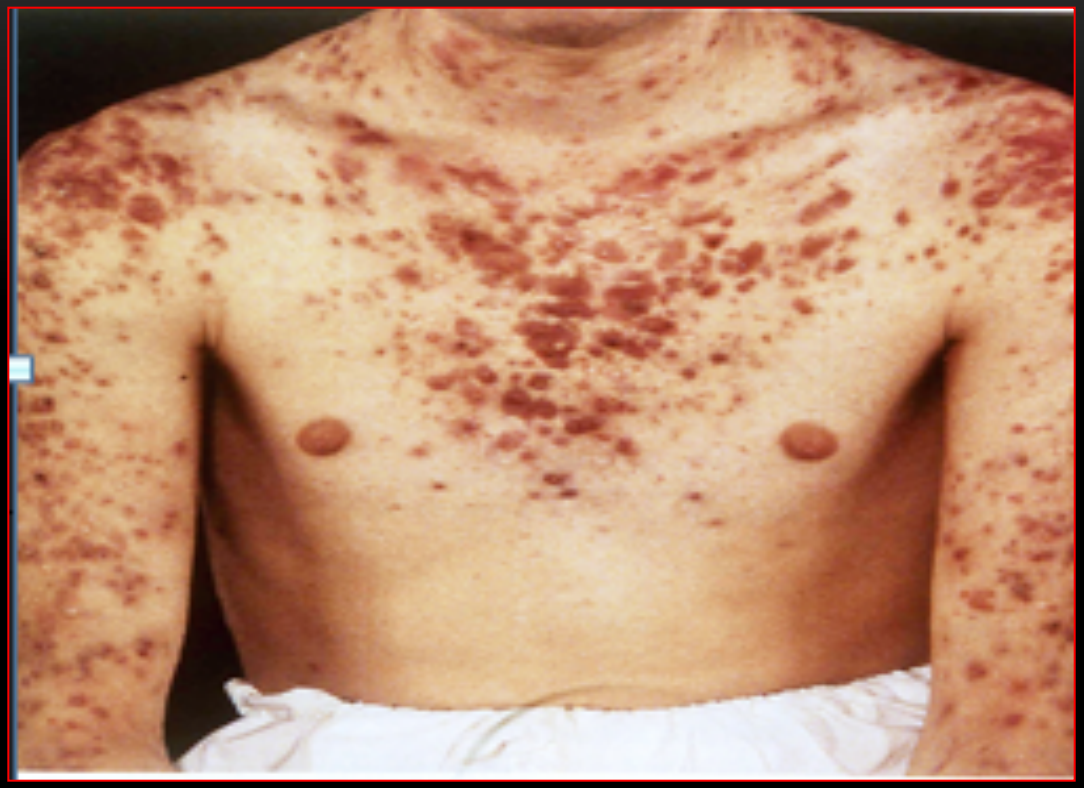
- Acne conglobata with nodules and scars



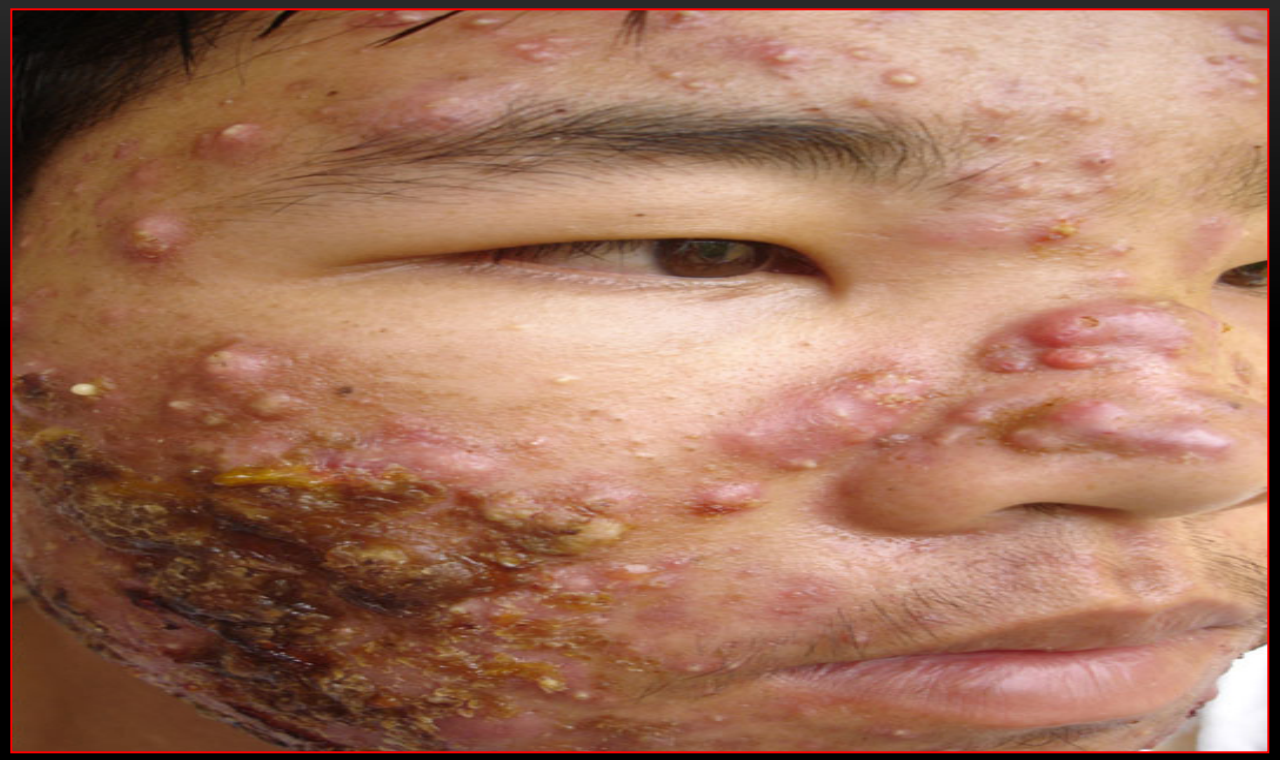
- Seborrohea and papules , pustules



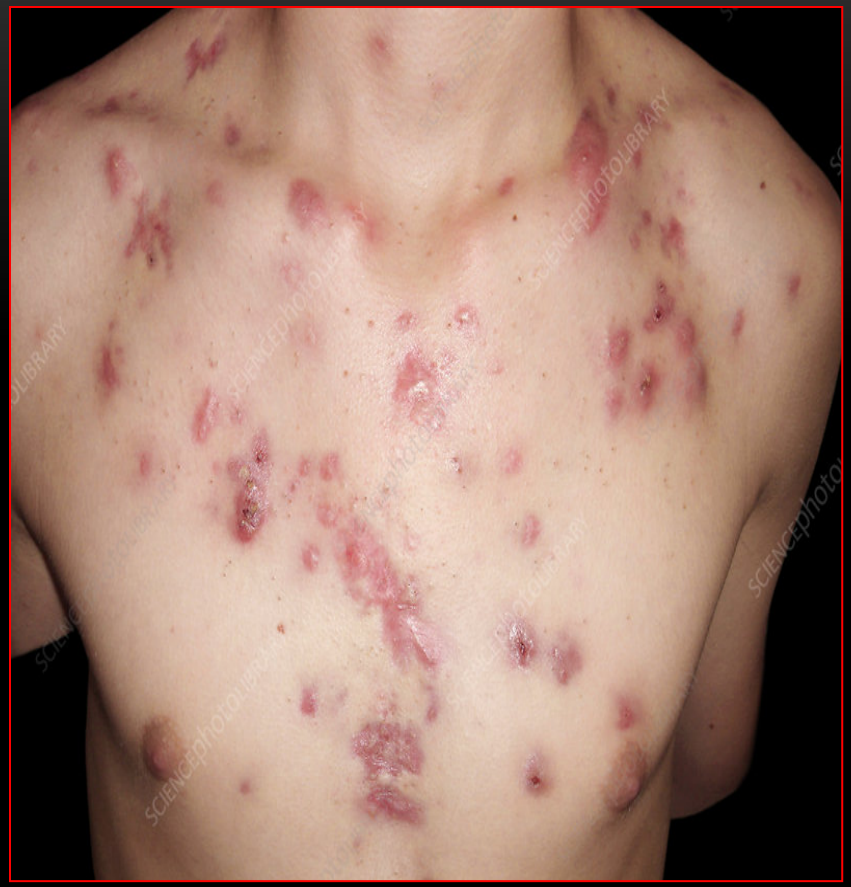
- Neonatal acne

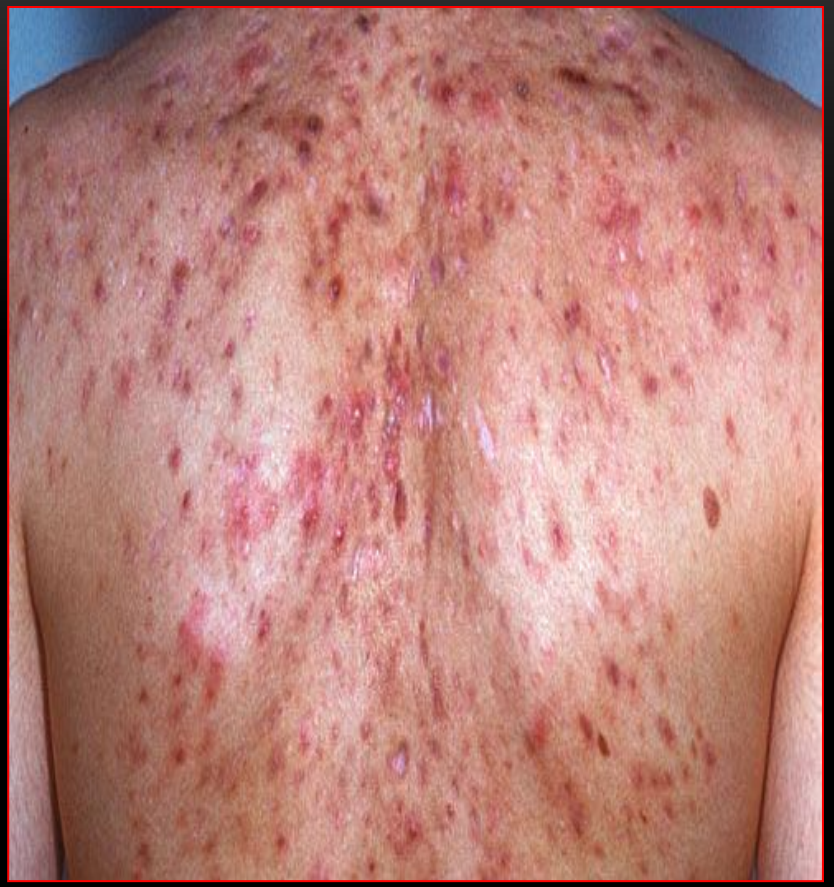


- Nodules , Keloides



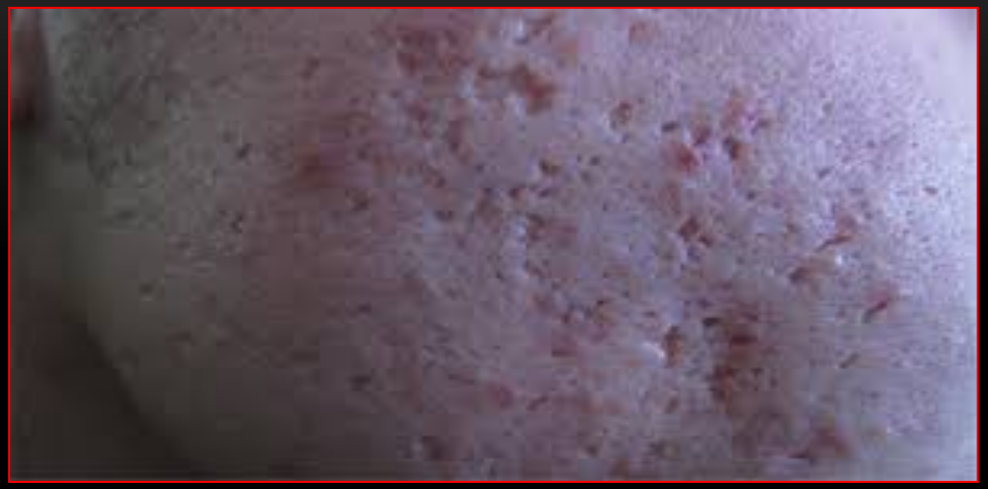
- Acne fulminans
- Nodules, pustules closed comedones,papules, pus .





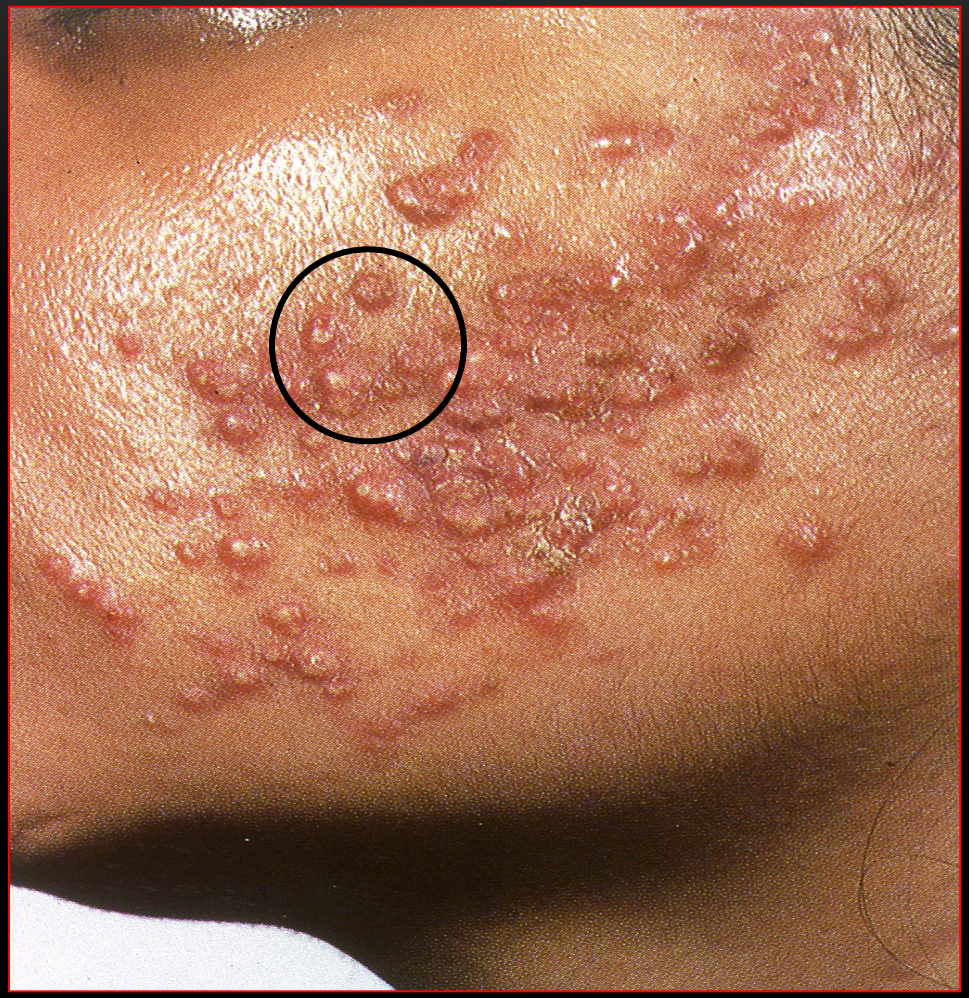
- Acne conglobata

  Nodules, Keloides, Sinuses, Scars

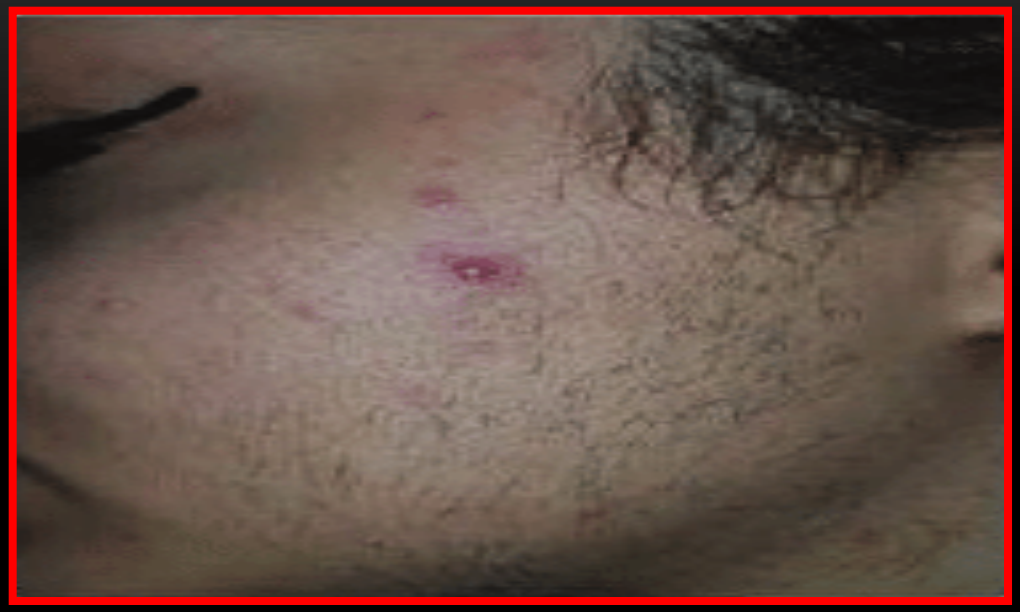


- Acne icepick and boxcar scars

- Chloracne

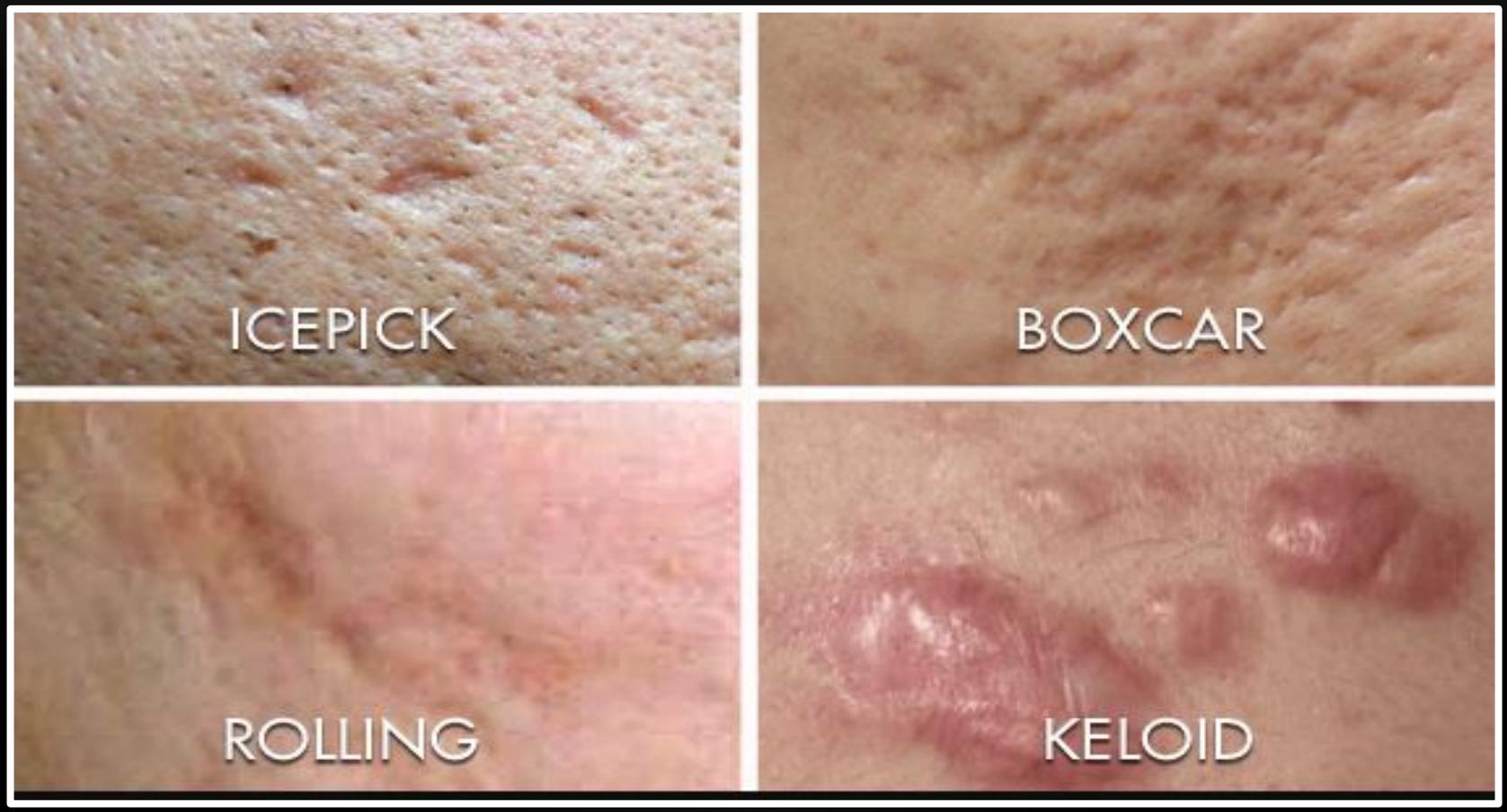


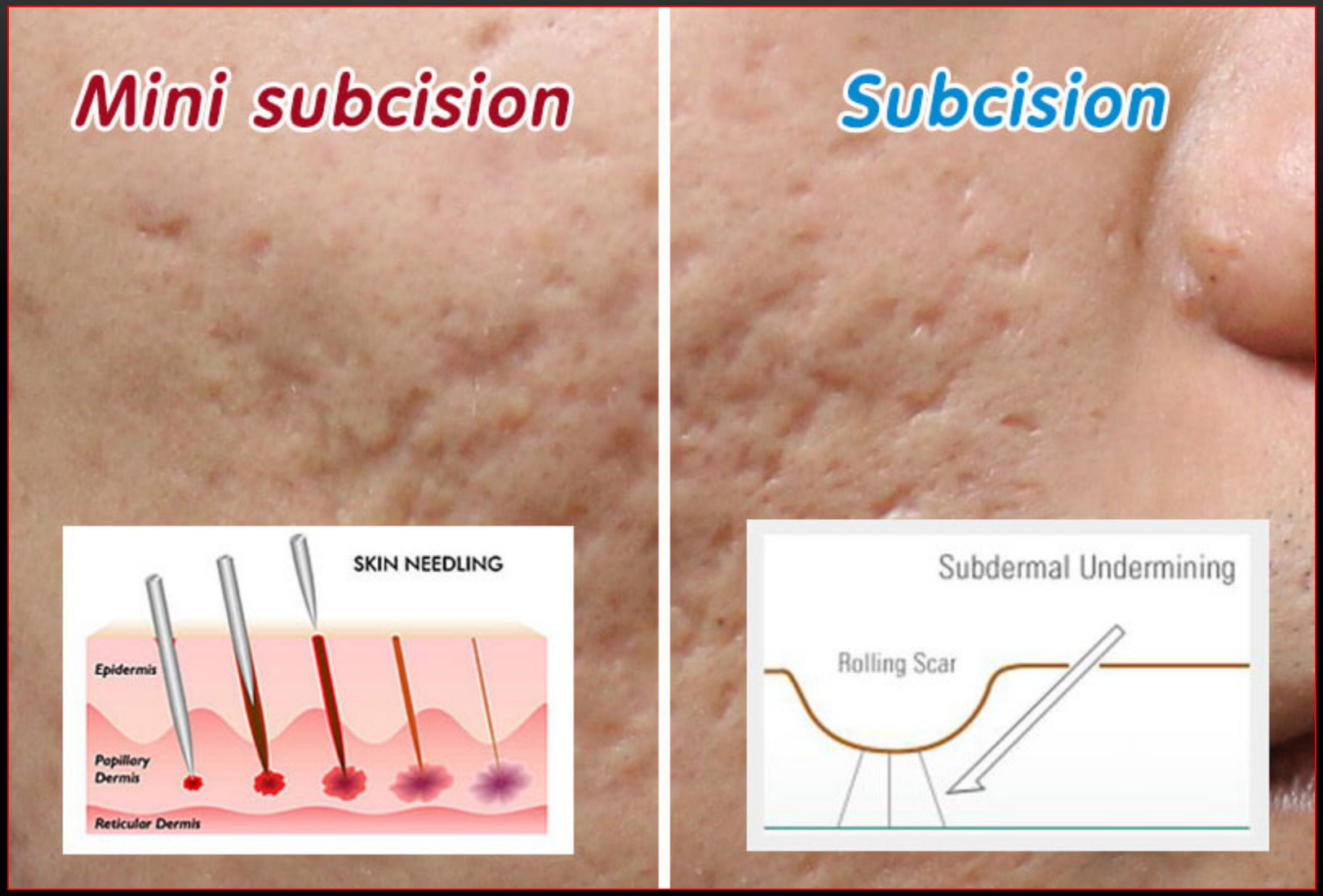
- Monomorphic steroid acne



- Hirsutism and acne

ACNE SCARS

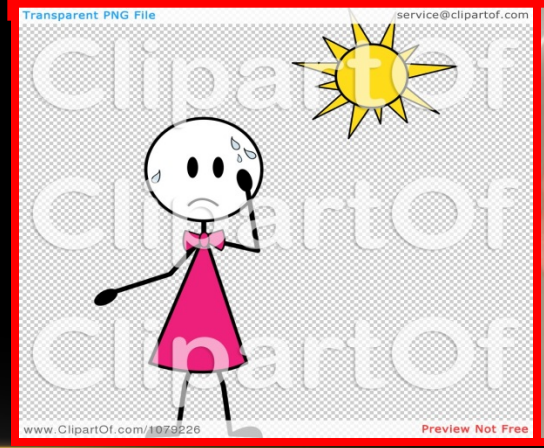




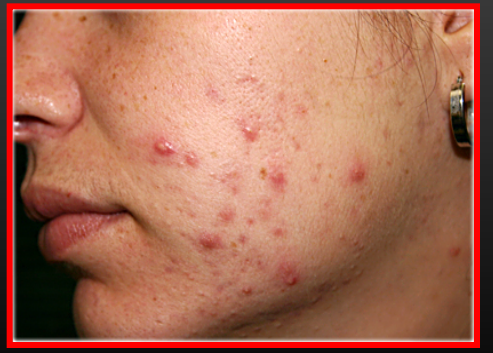
- Rolling acne scars

AGGRAVATING FACTORS

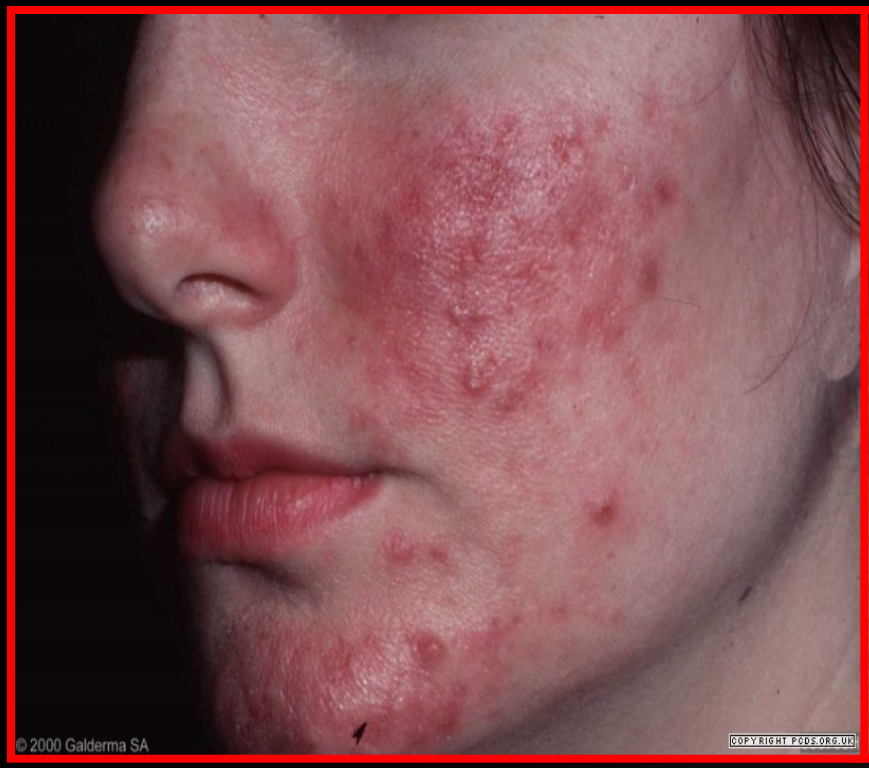
- Diet has no relation to acne.
- Pre menstrual flare.
- Sweating.
- UV radiation.
- Stress.
- Friction.
- Cosmetics.



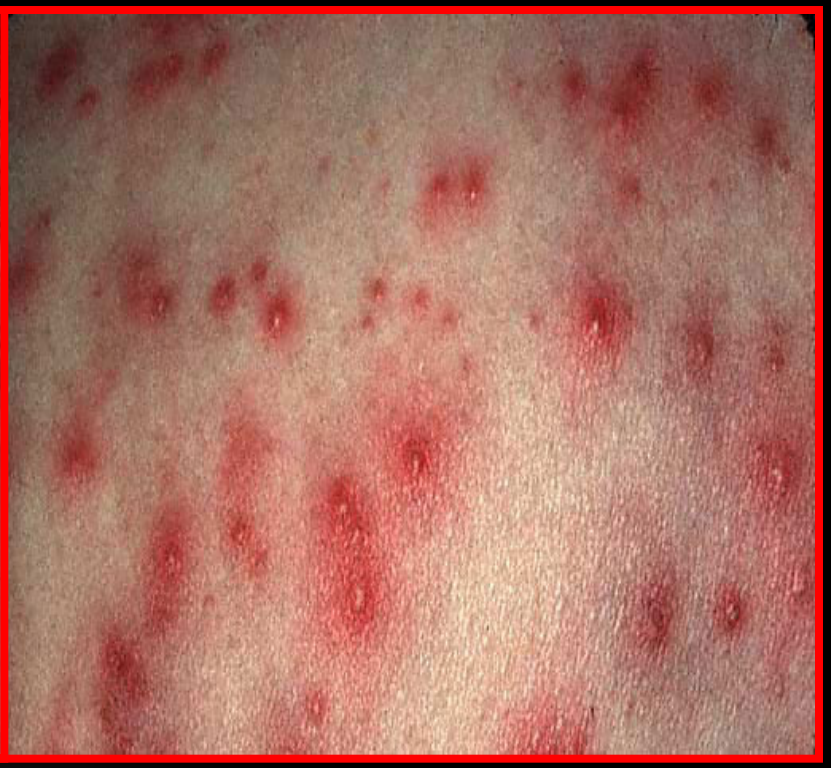
DIFFERENTIAL DIAGNOSIS



- Rosacea



- Folliculitis



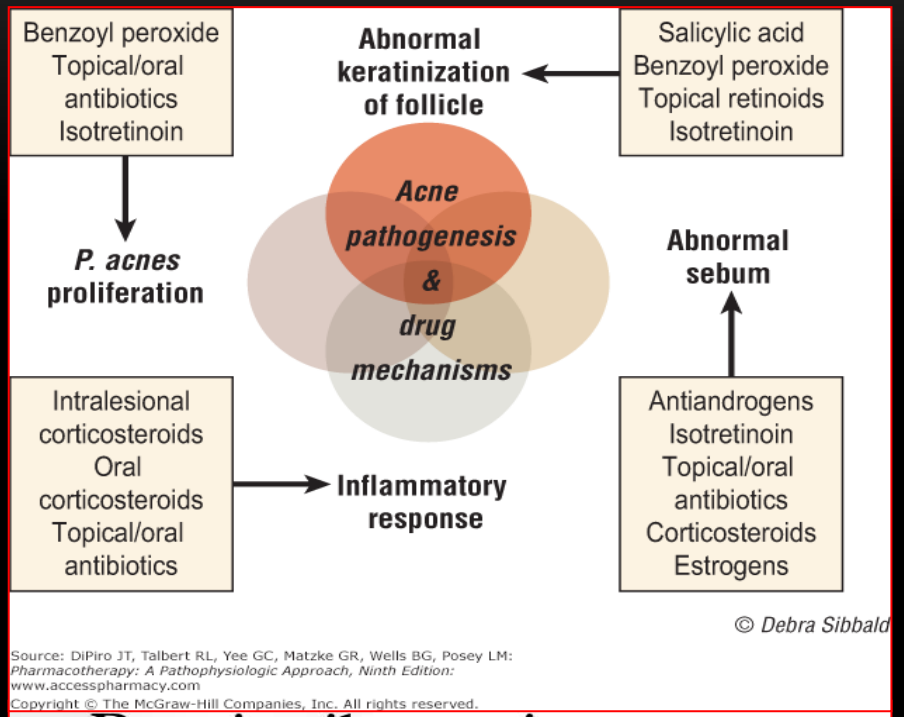
ACNE TREATMENT - GOALS

- Decrease scarring.
- Decrease unsightly appearance.
- Decrease psychological stress.
- Explain length of treatment, may be several months and initial response may be slow but must persevere

.

PRINCIPLES IN TREATING ACNE:

- Reverse the altered keratinization.
- Decrease the intra-follicular P.acnes.
- Decrease sebaceous gland activity.
- Decrease inflammation.



TREATMENT

Topical	Oral	Miscellaneous
Benzoyl peroxide	**Antibiotics:**	Laser resurfacing
Retinoic acid	Doxycycline	Chemical peel
Adaplene Tazarotene ,	Minocycline	Comedo extraction
Resorcinol,Sulfer	Erythromycin	Dermaberasion
Azeliac acid	**Retinoids:**	Intralesional steroid
Antibiotics:	Isotretinoin	CROSS
Clindamycin	**Hormones:**	
Erythromycin	Antiandrogens	
	OCP	

TOPICAL THERAPY

Benzoyl peroxide:

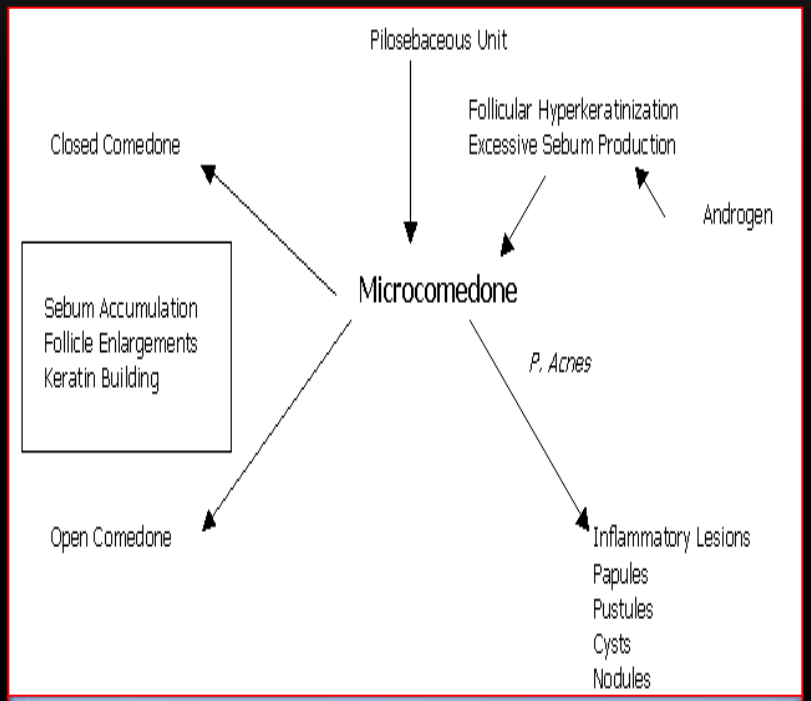
- High antibacterial activity.
- Drying effect.
- Could cause irritation and contact dermatitis.

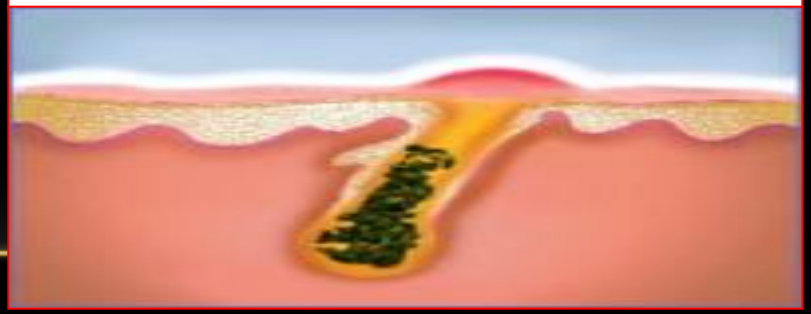
Retinoic Acid:

- Comedolytic activity.
- Advice patient not to expose to sun as it may lead to burn.

Salicylic Acid:

- Comedolytic, less potent than retinoic acid.



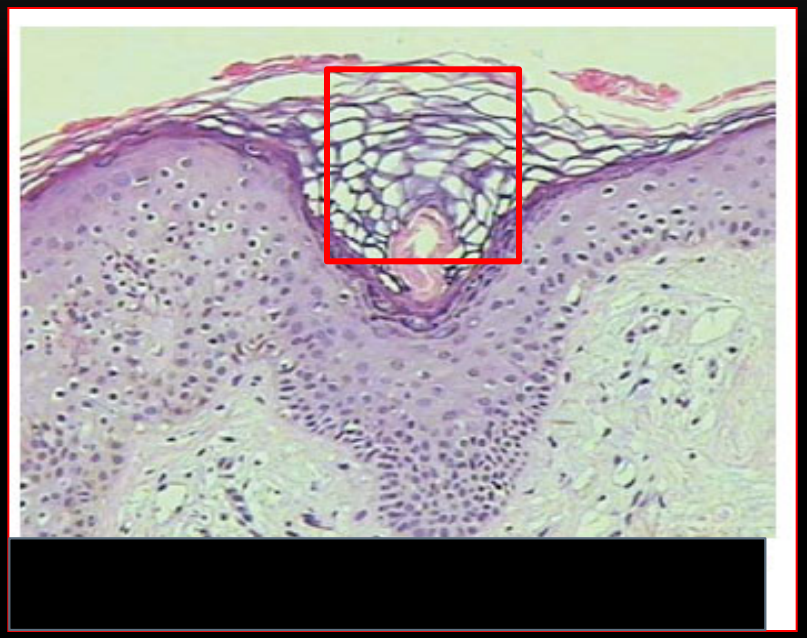


TOPICAL THERAPY:

Resorcinol and sulfur: are keratolytic.

Azeliac acid: antibacterial and bleaching.

- Topical treatment result is noticed within 2 months.



TREATMENT

Drug	Dose	Recommendation and Duration
Tetracycline	0.5 BD	Taken on empty stomach to promote absorption Not to be taken with milk or antacid Not to be given to pregnant women "Why"?
Erythromycin	0.5 g BD	For pregnant women with bad acne
azithromycin	250mg	3 consecutive days/w for pregnant women
Doxycycline	100 mg/day	Can be taken with food, photosensitivity.
Minocycline	100 mg/day	Drug could cause blue – black pigmentation in scars, lupus, hepatitis, photosensitive drug rash
Clindamycin		Could cause pseudo membranous colitis
Trimethoprim Sulphamethoxazole		Used only in resistant cases .
Isotretinoin	0.5-1mg/kg	Give long term remission Given in resistant acne

ACNE TREATMENT

Systemic Antibiotic:

- have to be used for 3 months to avoid resistance.

Hormonal:

- OCP consider less androgenic progestogen eg marvelon/cilest, but increased risk of DVT.
- Consider cyproterone acetate (antiandrogen) with oestrogen(dianette) . flutamide (antiandrogen).

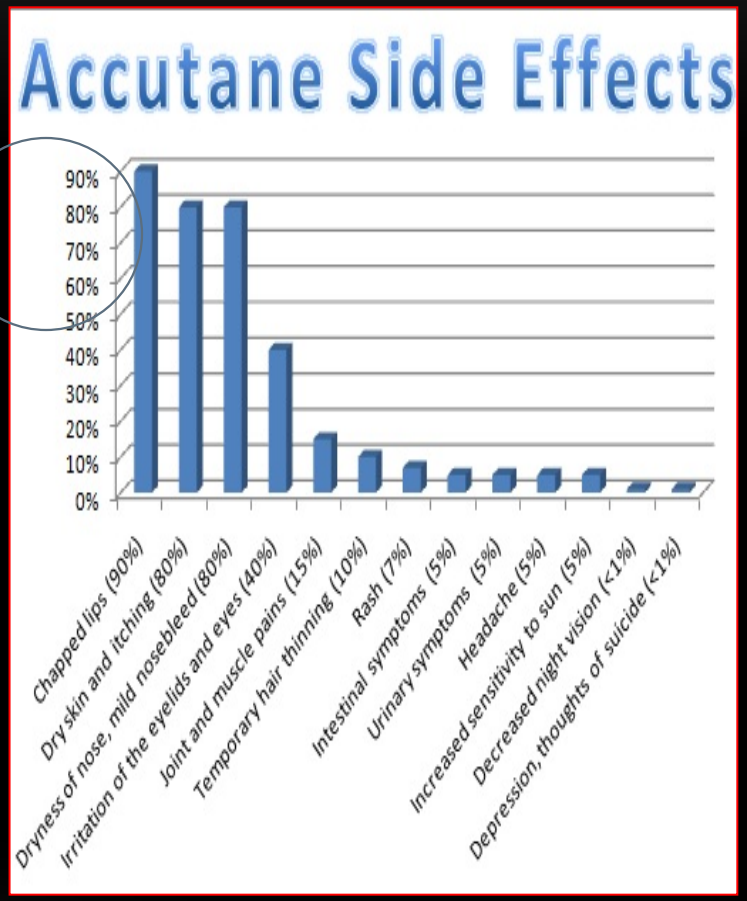
Isotretinoin [Accutane]:

- Vitamin A analogue

TREATMENT

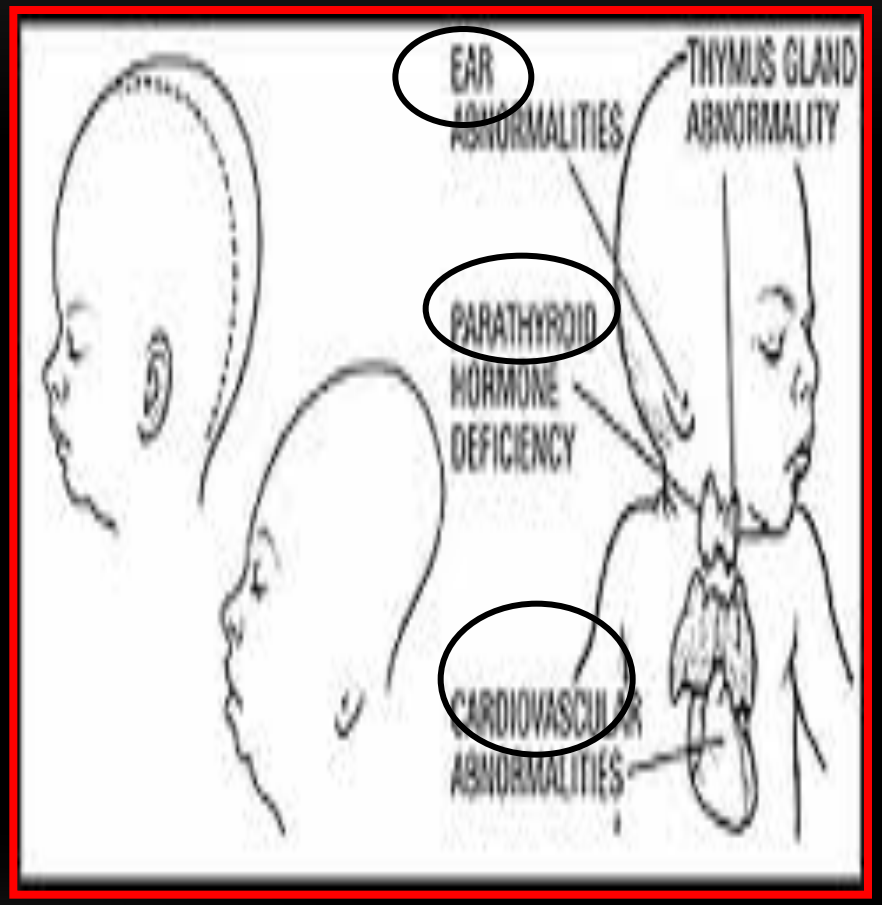
Side Effects of Isotretinoin:

- Dryness of mucous membranes [Chelitis, Conjunctivitis].
- Headache and increased intracranial pressure [Pseudotumor cerebri].
- Isotretinoin should not be given with tetracycline.
- Contact lens intolerance.

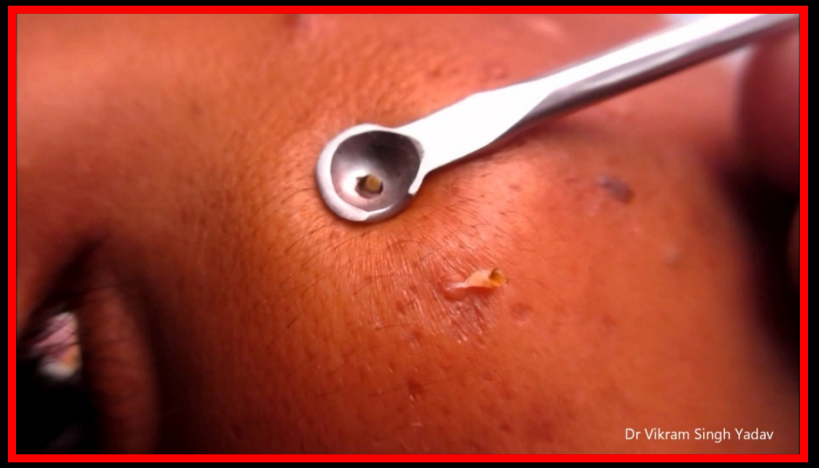


TREATMENT

- Bone and joint pains.
- Increases triglycerides and cholesterol or LFT.
- Patients should avoid pregnancy 4 w after discontinuation of drug because of teratogenicity.
- Depression and mood swings.

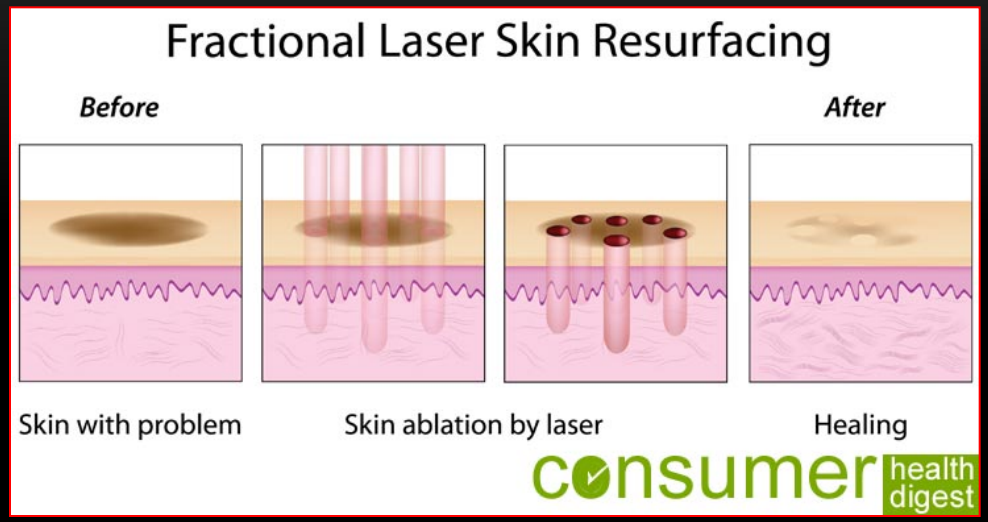


TREATMENT



- CROSS (chemical reconstruction of skin scars)
- Comedo extraction

TREATMENT


Fractional Laser Skin Resurfacing
Before
After
Skin with problem
Skin ablation by laser
Healing
consumer health digest

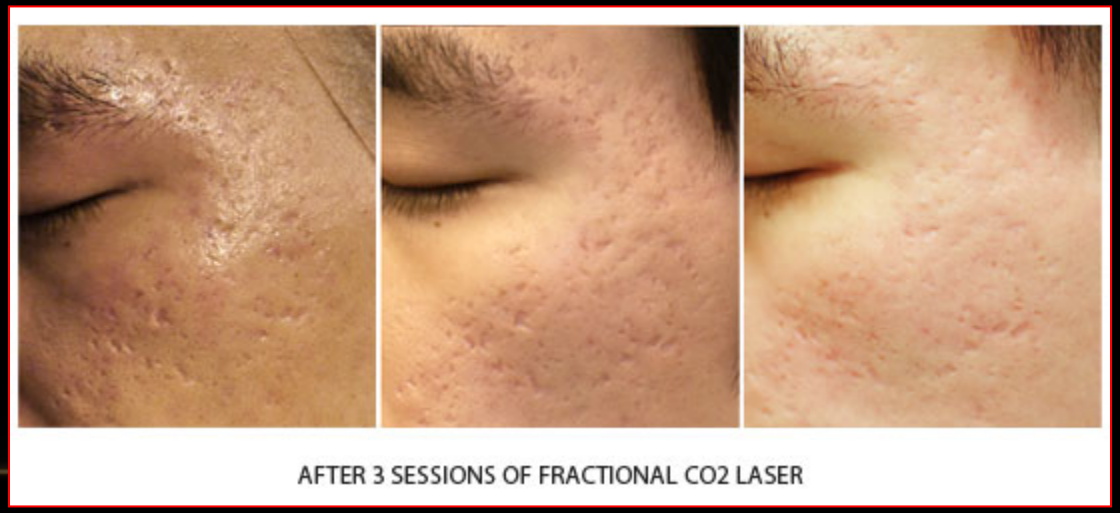
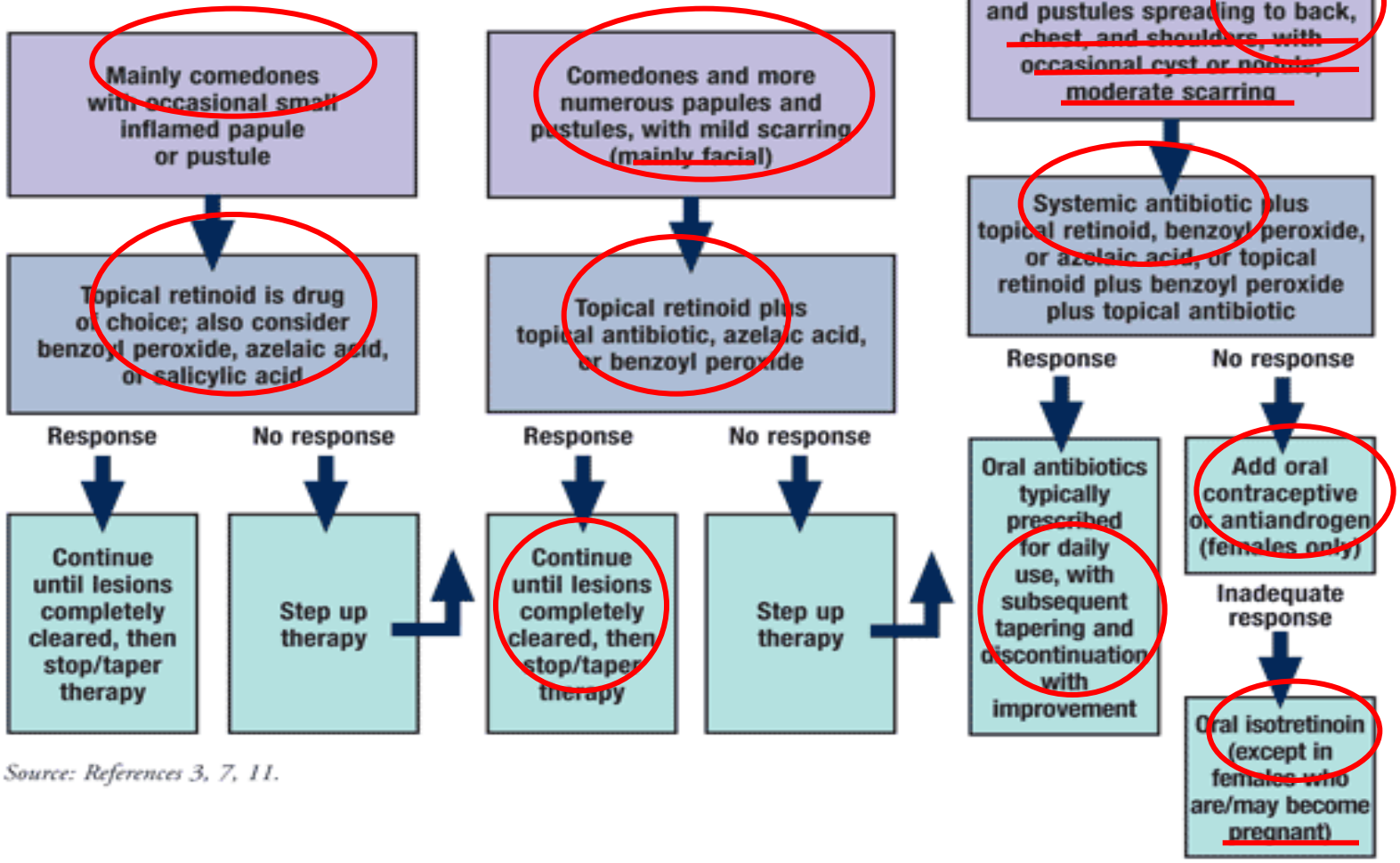

AFTER 3 SESSIONS OF FRACTIONAL CO2 LASER

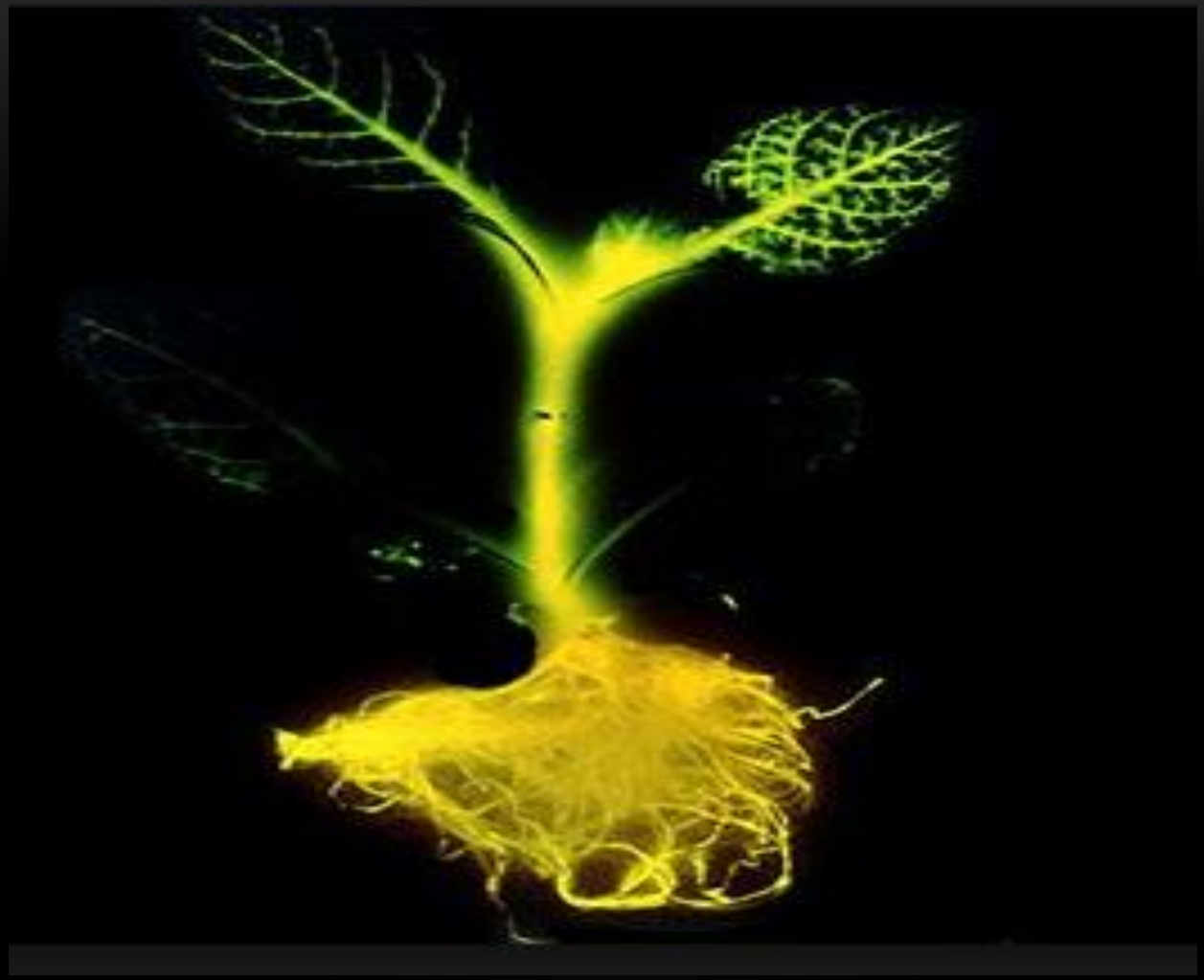
Figure 1. Stepwise approach to acne vulgaris treatment.



Source: References 3, 7, 11.

TAKE HOME MASSAGE

- **A** avoid squeezing and manipulation.
- **C** comply with medication.
- **N** no cosmetics and moisturizers.
- **E** early treatment to avoid scaring.



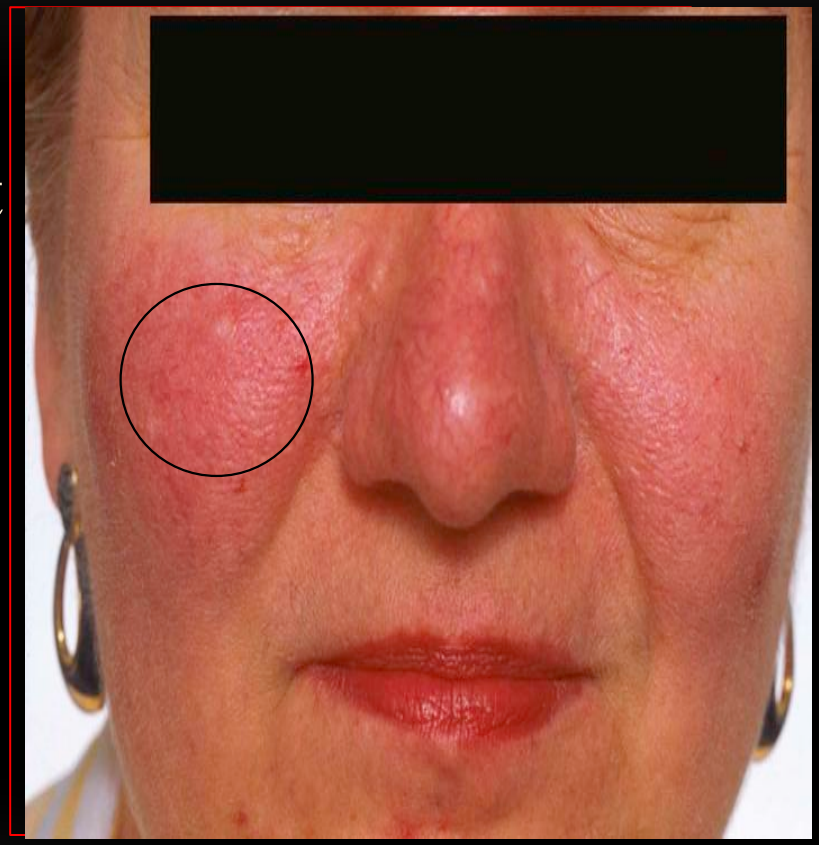
ROSACEA

Definition:

- Papules and Papulo- pustules in the center of the face against vivid erythematous background with telangi-ectasia.

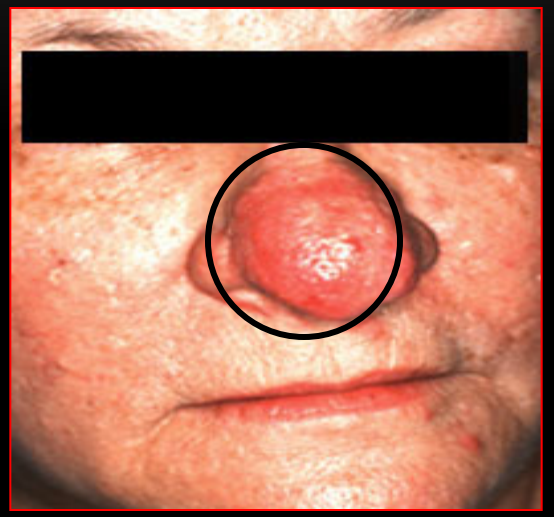
Incidence:

- Common in 3rd and 4th decade
- Peaks between 40-50.



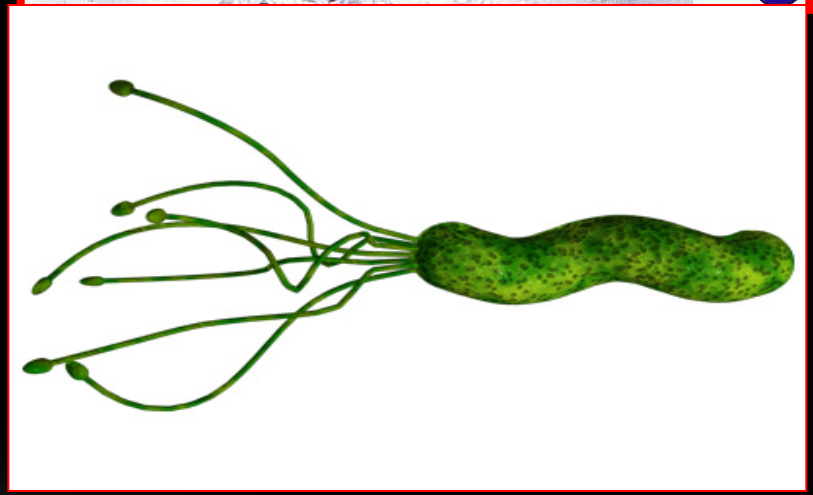
ROSACEA

- Common in fair skin.
- Women are affected more than men but rhinophyma is more in men.



ROSACEA PATHOGENESIS:

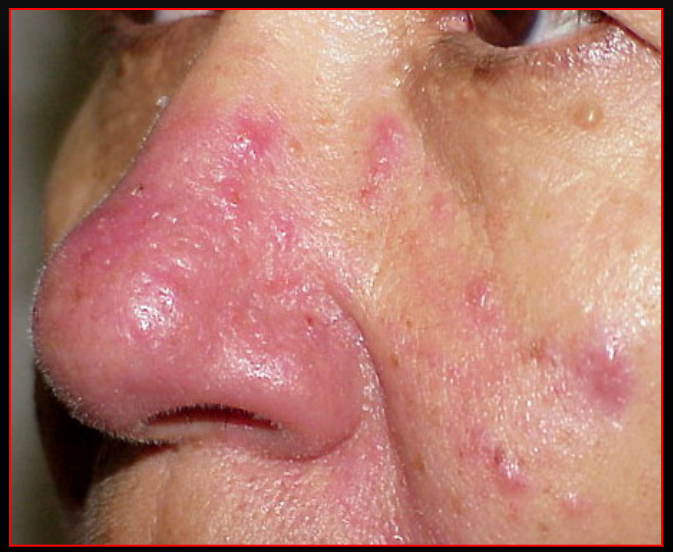
- Unknown.
- Genetic predisposition (38% have a relative).
- Sunlight and heat.
- Constitutional predispostion to flushing & blushing.
- Demodex folliculorum mite.
- H. Pylori infection.



CLINICAL FINDINGS

The Hall Mark Is:

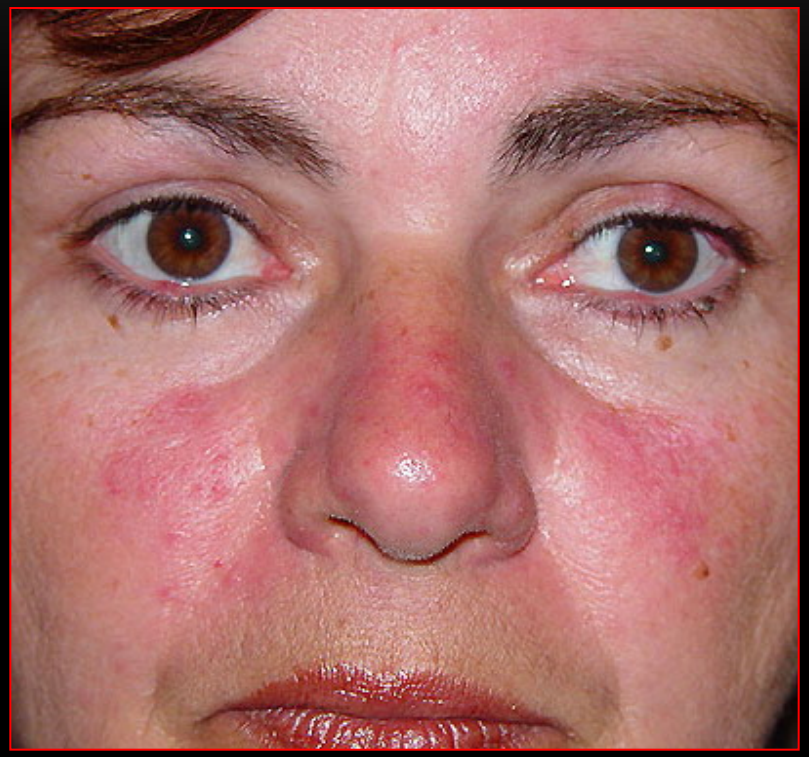
- Episodes of flushing and erythema in butterfly distribution.
- Papules and pustules.
- Erythema and telangiectasia.
- Absent comedons.
- Granulomas [firm papules].



CLINICAL FINDINGS

Localization:

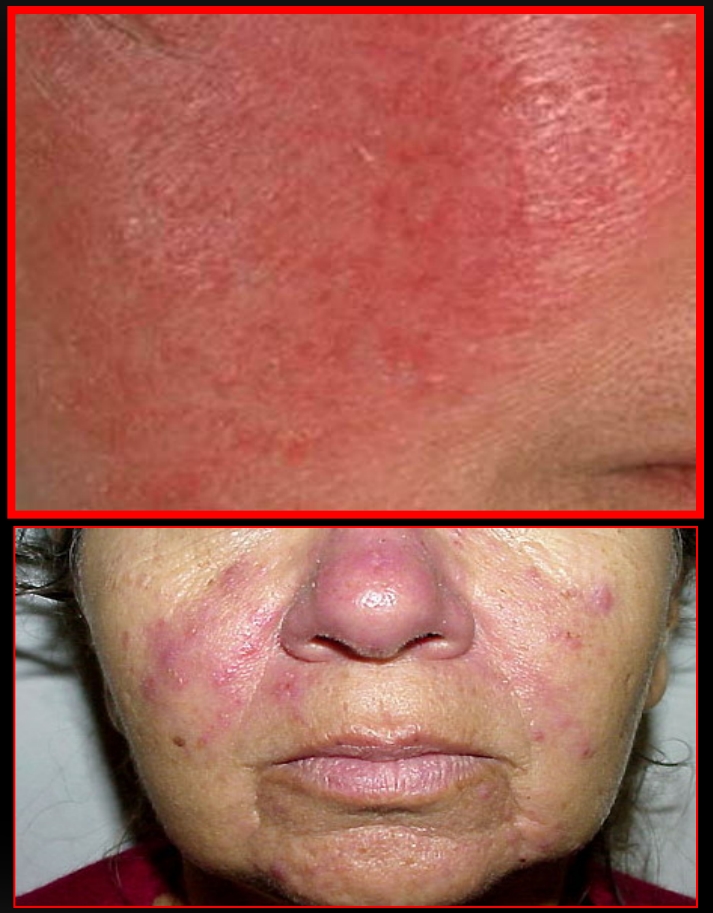
- The nose, cheeks, chin, forehead, glabella.
- May involve ears, chest.



CLINICAL FINDINGS

Types of Rosacea:

- Erythematotelangictatic.
- Papulopustular.
- Ocular.
- Phymatous.

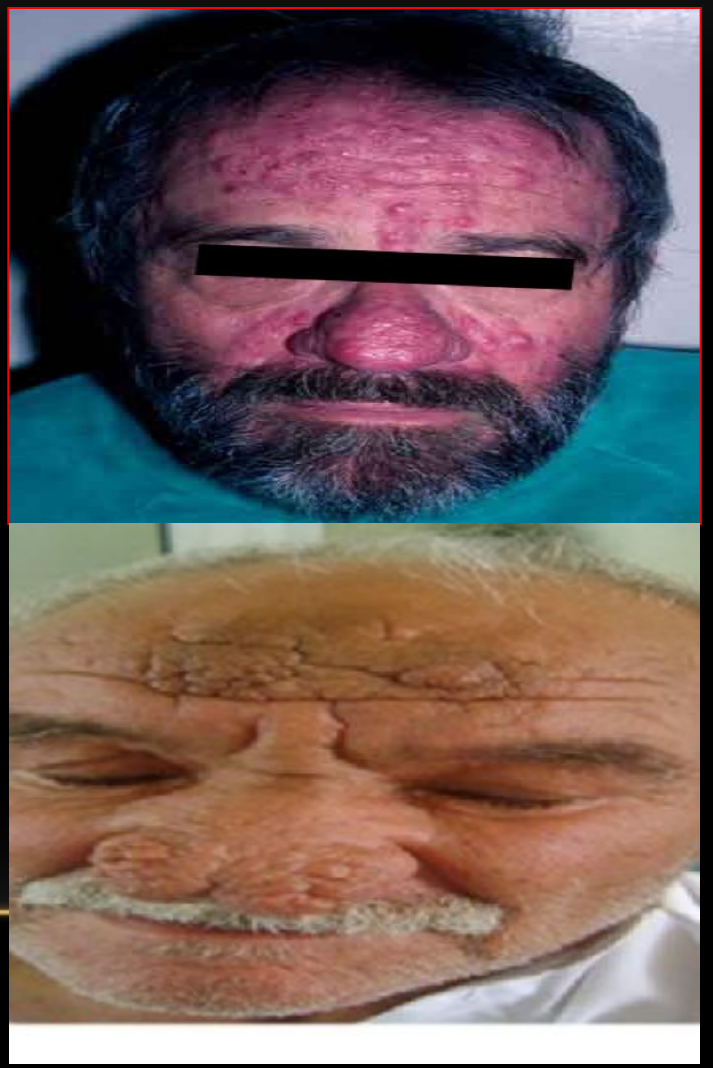


COMPLICATIONS

Phymatous complication:

Rhinophyma: Swelling of the nose due to sebaceous gland hyperplasia.

Other phymatous complications include gnathophyma, otophyma, blepharophyma and metophyma.



COMPLICATIONS

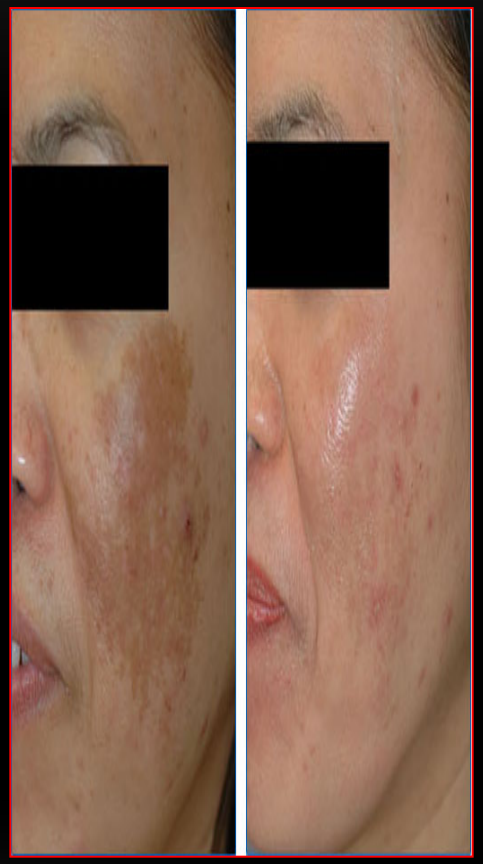
Eye complications:

- Occurs in 50% of cases including:
- Blepharitis.
- Conjunctivitis.
- Keratitis.
- Iritis.
- Eyelid telangi-ectasia.

ASSOCIATED DISEASES

MARSH syndrome =

- Melasma.
- Acne.
- Rosacea.
- Seborrheic dermatitis.
- Hirsutism.

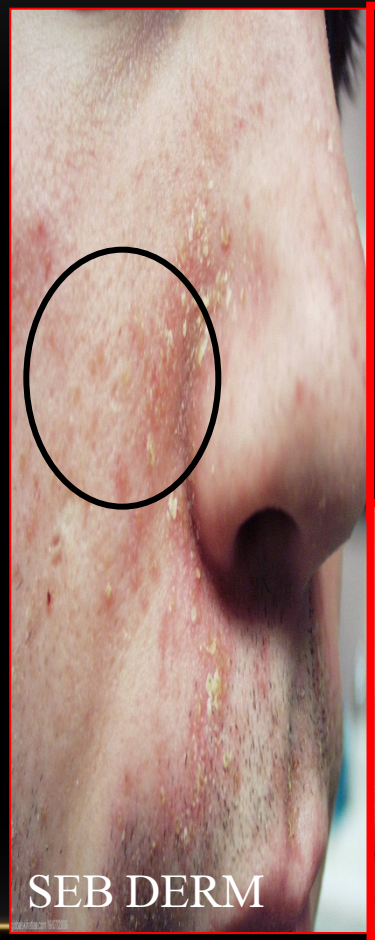


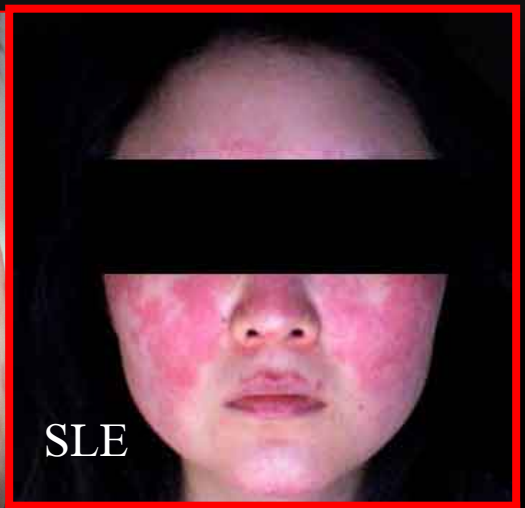
TRIGGERS

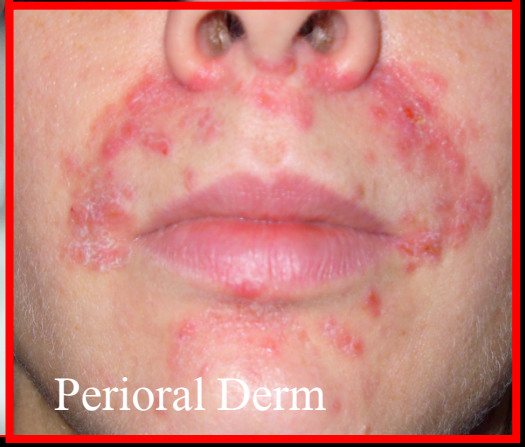
- Hot or cold temperatures, Wind.
- Hot drinks, Caffeine, Spicy food, Alcohol.
- Exercise.
- Emotions.
- Topical products that irritate the skin and decrease the barrier.
- Medications that cause flushing (nicotinamide).

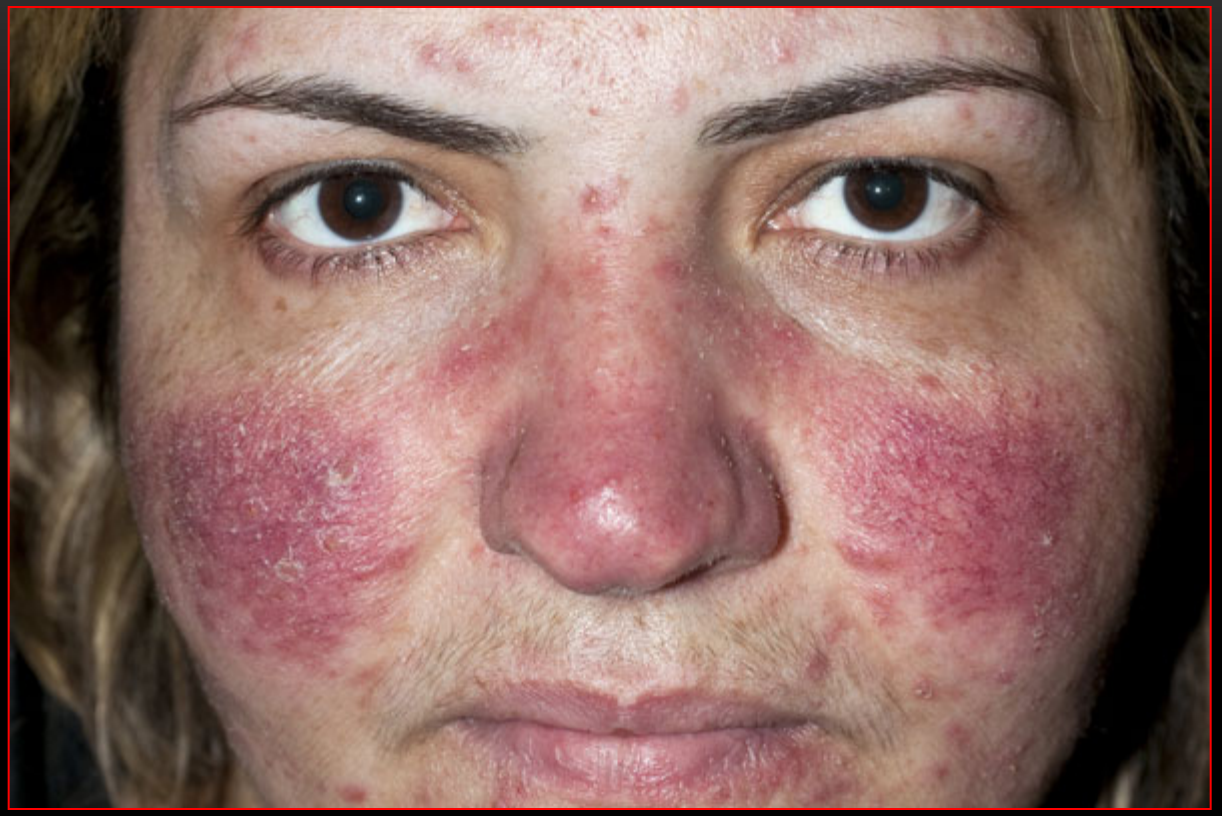
DIFFERENTIAL DIAGNOSIS

- SLE (erythema only).
- Acne (comedons).
- Seborrheic dermatitis no pustules.
- Perioral dermatitis.

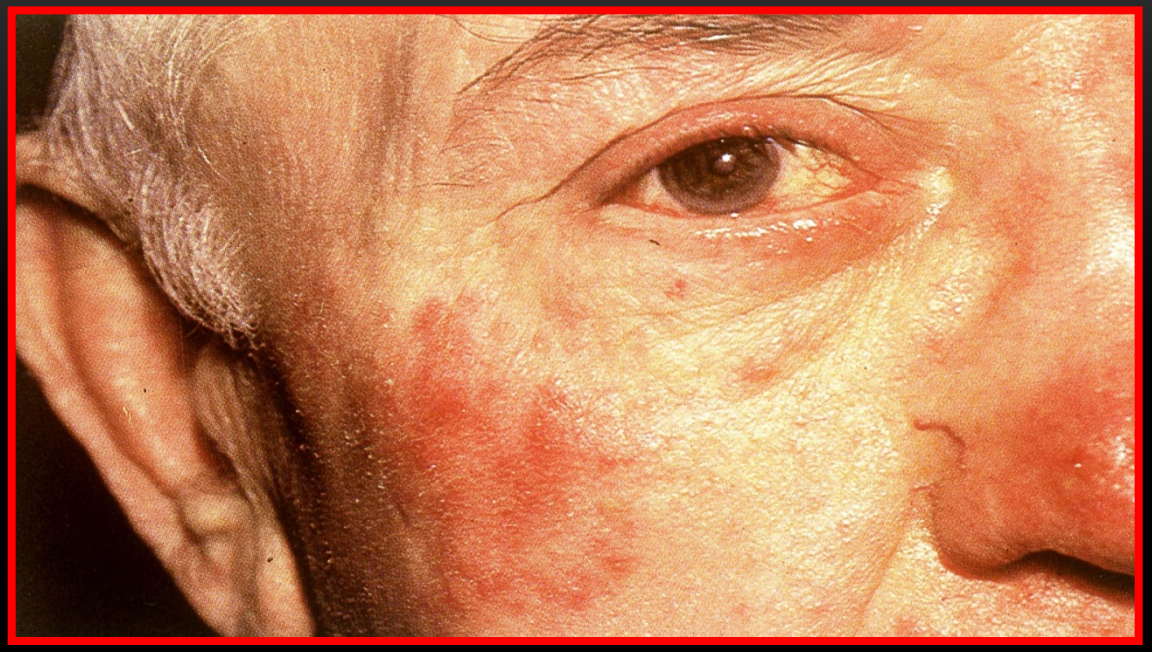




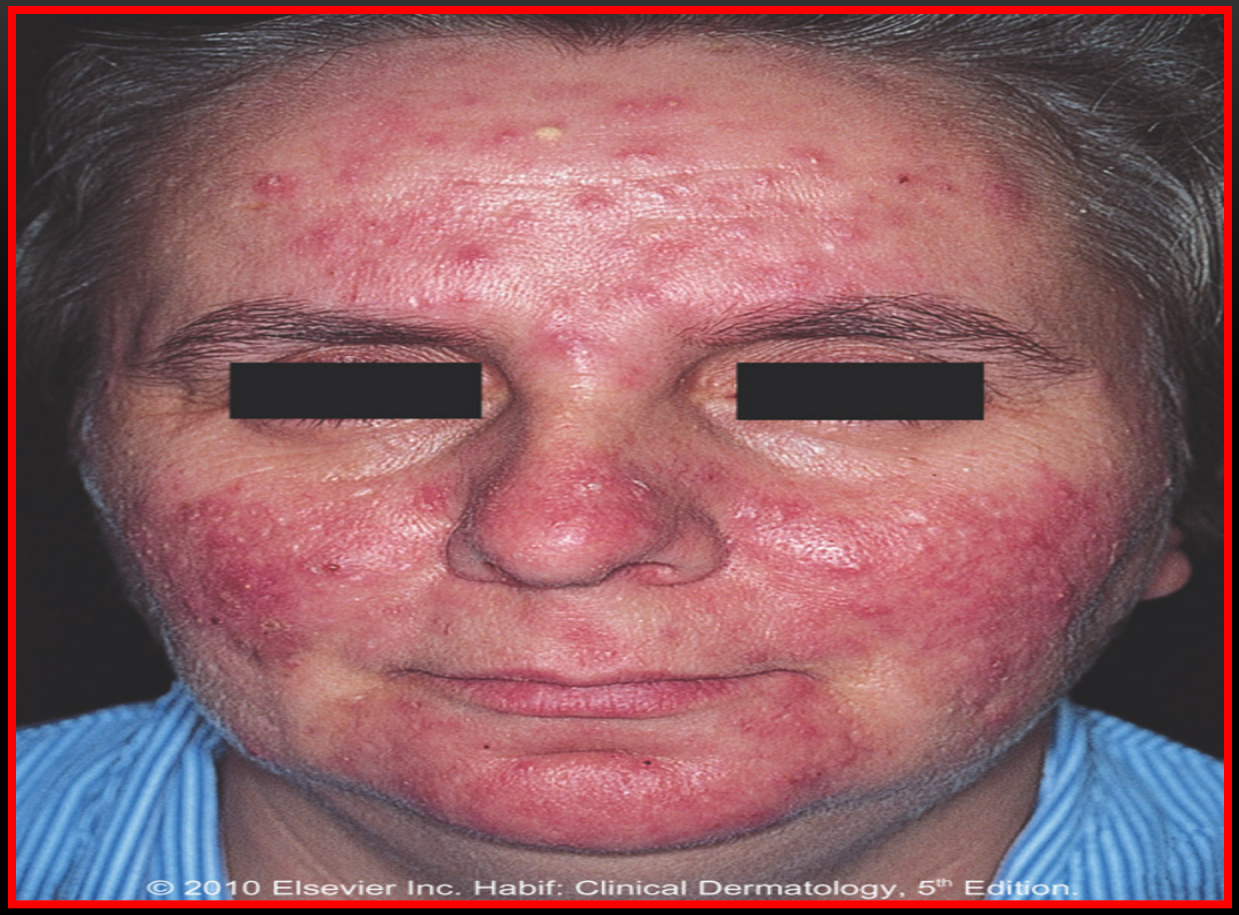




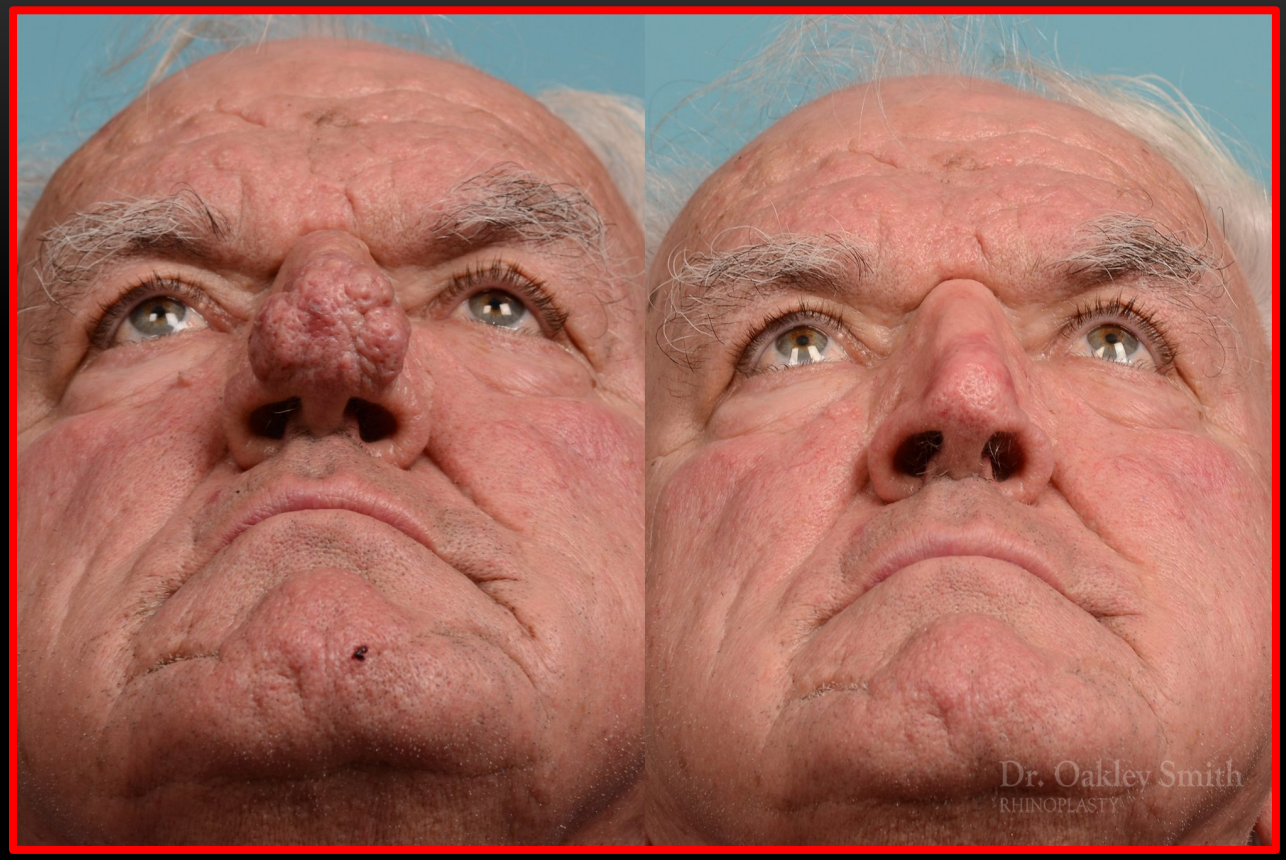
- Malar erythema and scales



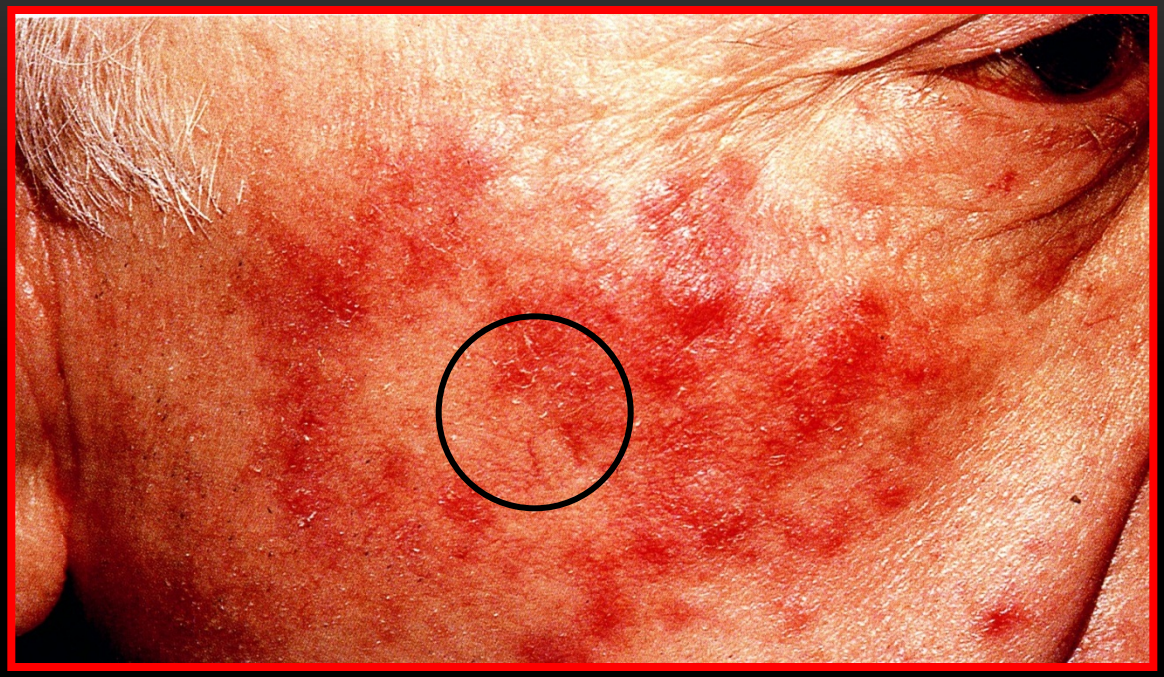
- Telangictasia, papules , blepharitis , conjunctivites



- Papules on erythematous background



- Rhinophyma



- Papules on erythematous background , telangictasia

TREATMENT

Schedules are determined by stage & severity.

General measures:

- The skin of rosacea patients is delicate to physical insults.
- Patient should use mild soaps or diluted detergents.
- Protection against sunlight by sunscreen
- Avoid hot drinks and heat.

TREATMENT

Topical	Systemic
1.Topical antibiotics Clindamycin. Erythromycin.	Tetracycline reduces erythema.
2. Metronidazole –affects papules or pustules but no effect on erythema	Oxy-tetracycline.
3. Imidazoles e.g. Ketoconazole cream – has anti-inflammatory action	Minocycline
4. 2-5% sulfur lotion,sulfacetamide	Doxycycline
5. Isotretinoin 0.1% in cream	Isotretinoin in resistant phymas cases (0.1 -0.2 mg/kg)
Antiparasitic : Lindane, permethrin Benzyl benzoate, Crotamiton ,ivermectin	Metronidazole 500 mg for 20-60 days
Sunscreen, Vascular laser, ,brimonidine α adrenergic blocker	Azithromycin

TREATMENT

Topical:

- Metronidazole gel 0.75%.
- Erythromycin 2% gel bid.

Systemic:

- Minocycline 100 mg bid till clear then taper.
- Doxycycline 100 mg bid then taper.
- Tetracycline 500 mg bid till clear and tapered.
- Anti H. pylori therapy.

TAKE HOME MASSAGE

R recognize triggers.

O ocular hygiene.

S sunblock.

A avoid hot food.

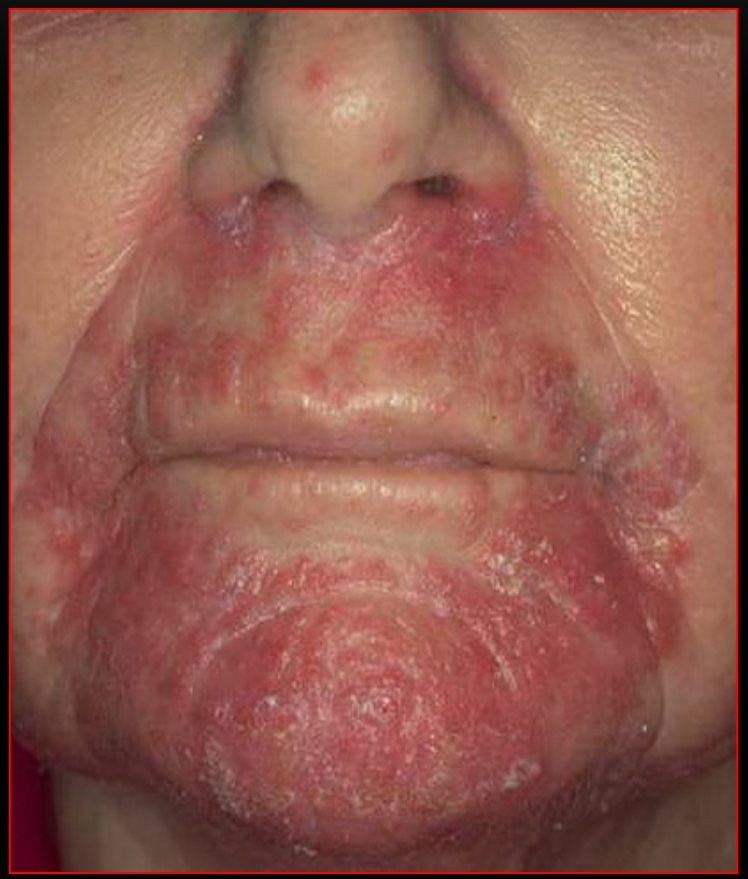
C comply with instructions.

E early treatment.

A avoid scrubs and harsh cleansers.

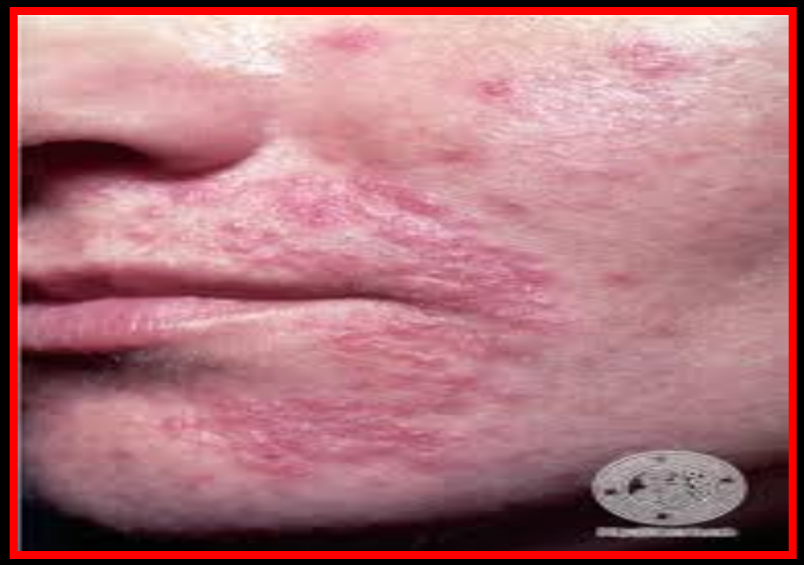
PERIORAL DERMATITIS

- Occurs mainly in young women.
- Discrete & confluent papulo-pustules over the perioral or periorbital skin sparing the vermilion border of lips.
- No comedons.

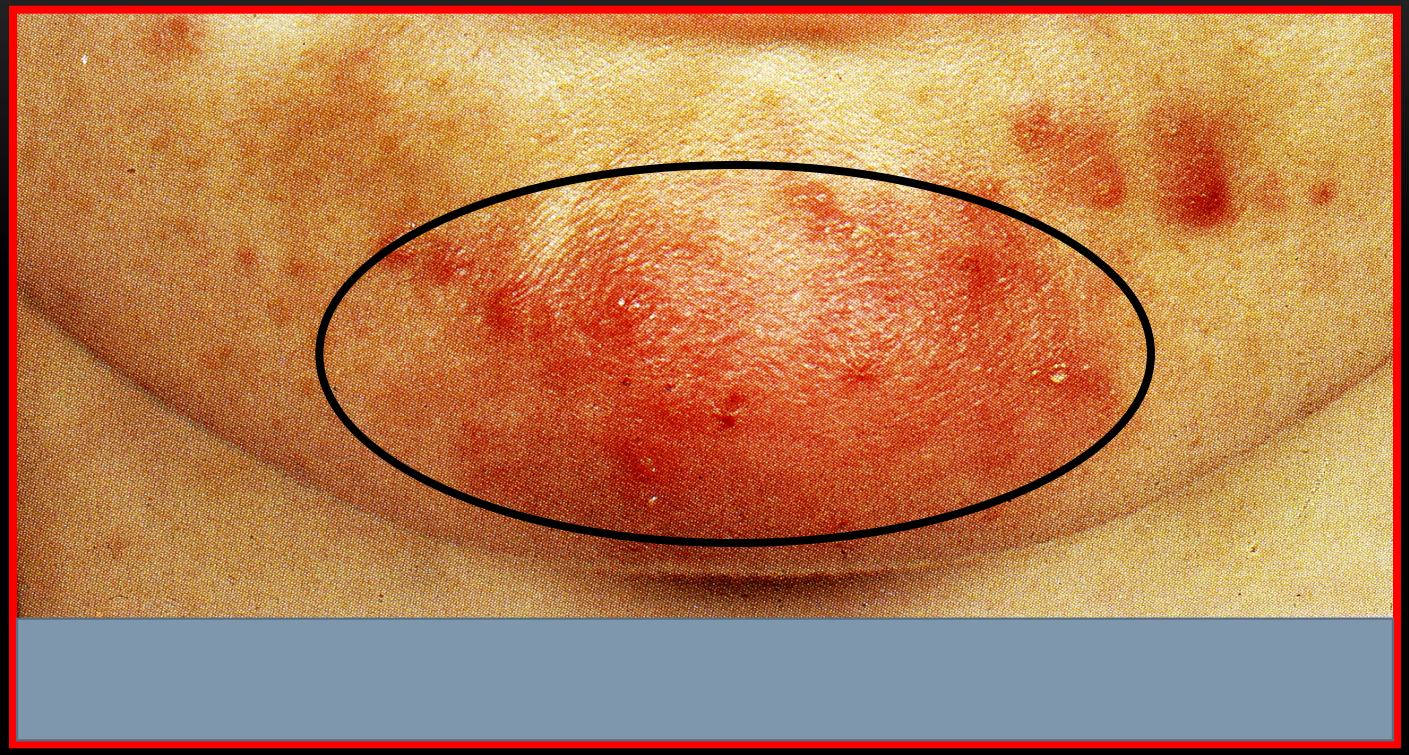


PERIORAL DERMATITIS

- Predominant in females at 20- 30 years of age.
- Aggravated by topical steroids, dentifrice and moisturizers.
- Occasionally itchy or burning or feeling of tightness.



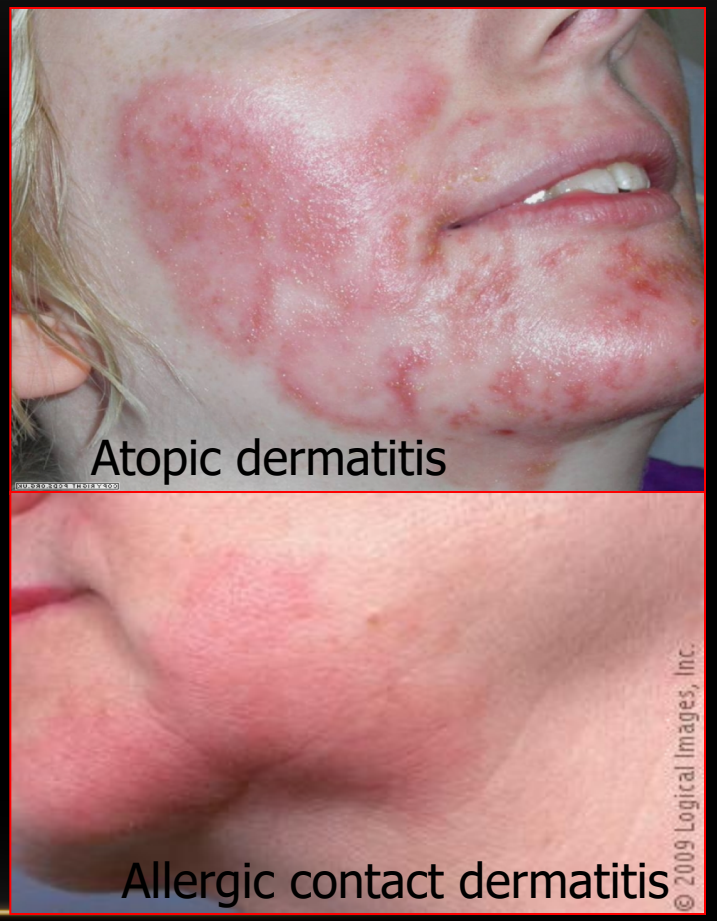
- Female with papules over chin



- Papules , pustules, no comedones

DIFFERENTIAL DIAGNOSIS

- Acne.
- Rosacea.
- Seborrheic Dermatitis.
- Atopic Dermatitis.
- Allergic Contact Dermatitis.



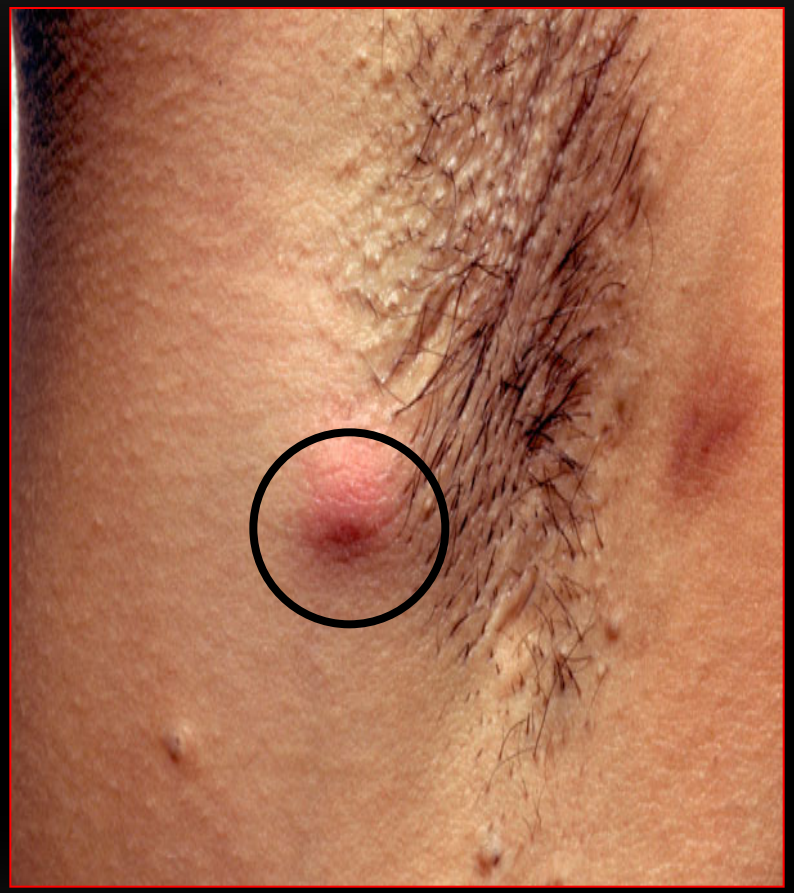
TREATMENT

- Wean patients of topical steroid.
- Stop any moisturizers.
- In pregnant mild cases use topical antimicrobial therapy with metronidazole gel and erythromycin solution.
- Pimecrolimus cream in steroid induced perioral dermatitis.
- Topical anti acne medication like adaplene and azelaic acid.
- In severe cases oral doxycycline or minocycline .
- Isotretinoin for resistant cases.

HIDRADENITIS SUPPRATIVA

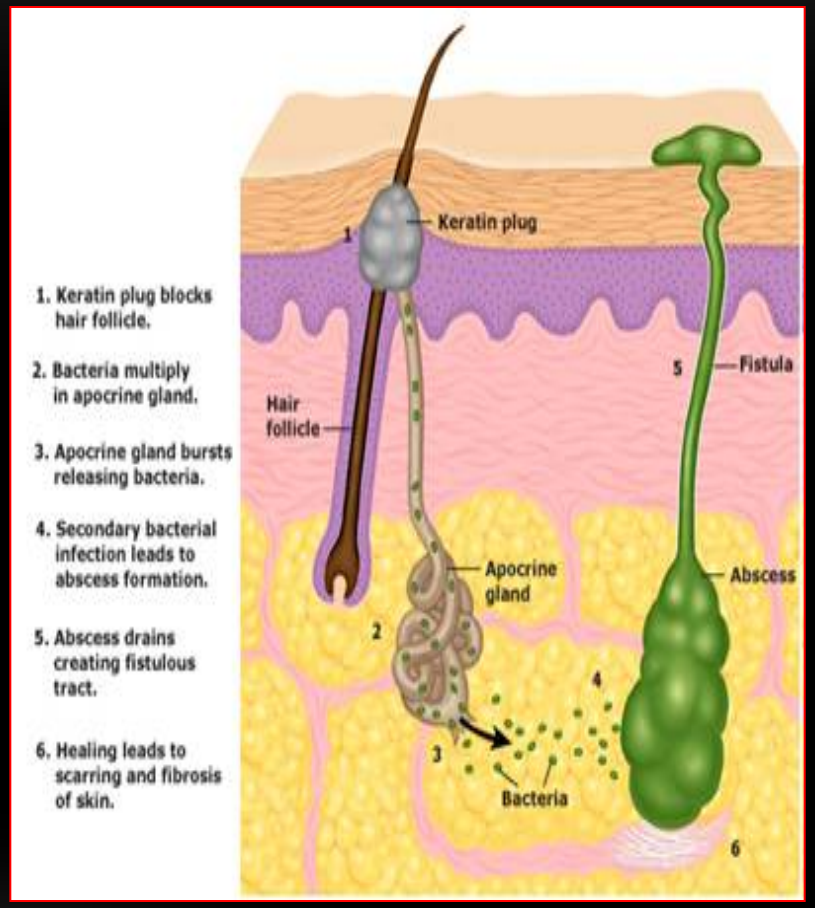
- Chronic recurrent supprative scarring disease of apocrine gland bearing skin (axillae, anogenital region, under female breast).

- Associated with obesity.
- Develops in 2nd and 3rd decades.



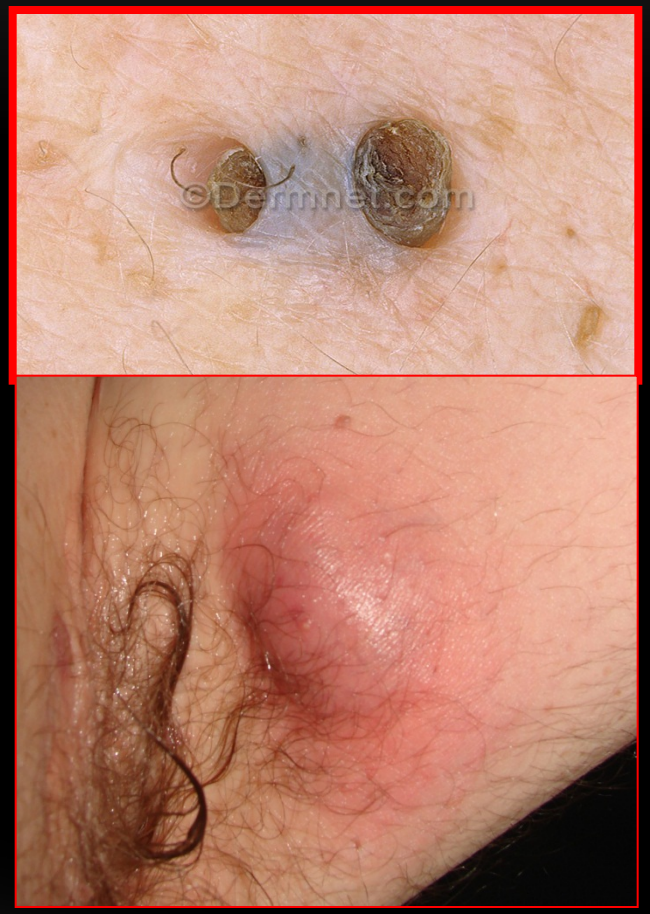
PATHOGENESIS:

- Unknown
- Apocrine duct occlusion.
- Dilatation and rupture of apocrine gland.
- Secondary bacterial infection with (Coagulase negative staphylococcus, anaerobes are often cultured) and draining sinuses.
- Genetic predisposition [38% have a relative affected].



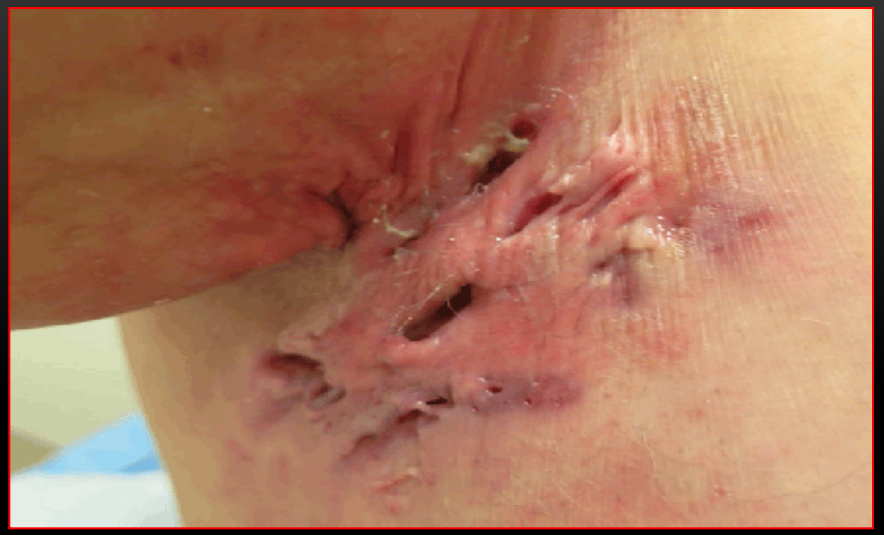
CLINICAL PRESENTATION

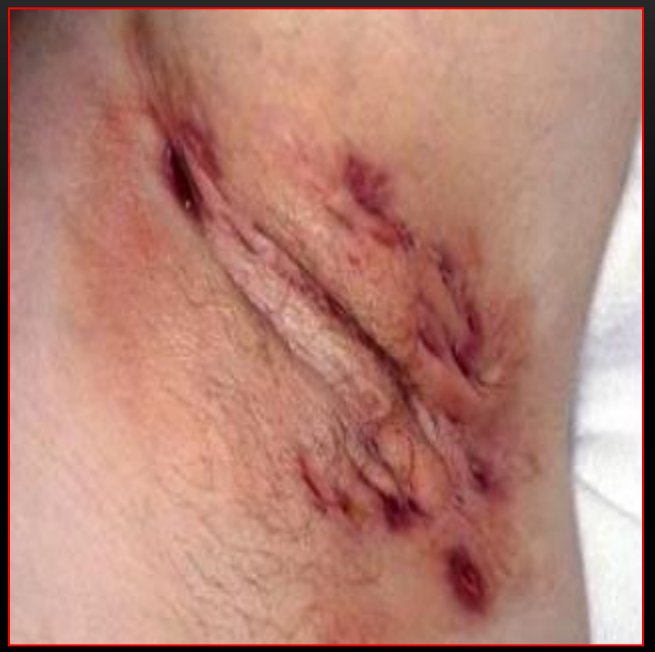
- Intermittent pain and tenderness.
- Pus drainage.
- Double headed comedons [characteristic lesion].
- Nodules, abscess, sinus tracts, scarring.
- Submammary, axillary , inguinal regions are common in females.
- Perineal involvement occurs more in males.

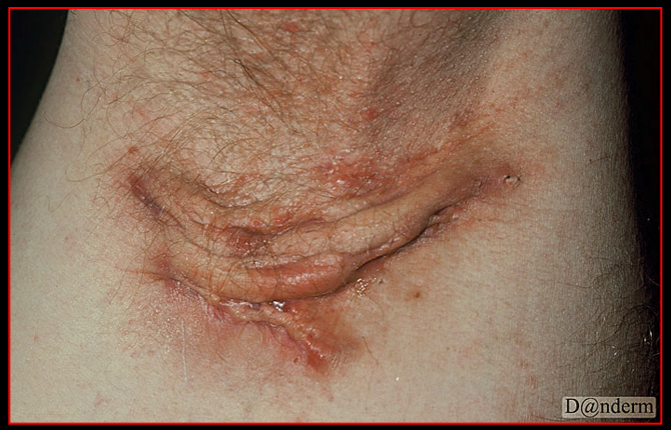


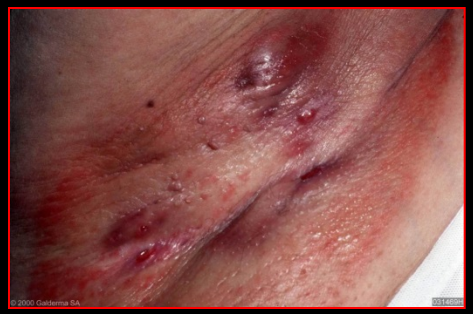
Appendix Table 3. Hurley Stages

Stage	Description
I	Abscess formation (single or multiple) without sinus tracts and cicatrization
II	Recurrent abscesses with tract formation and cicatrization; single or multiple, widely separated lesions
III	Diffuse or near-diffuse involvement or multiple interconnected tracts and abscesses across the entire area



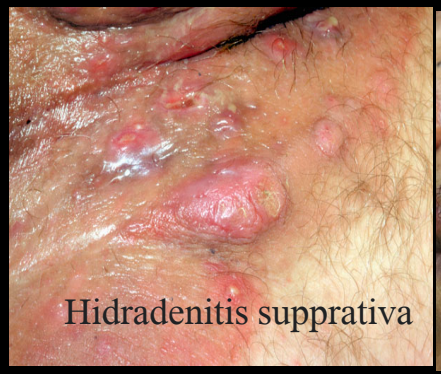


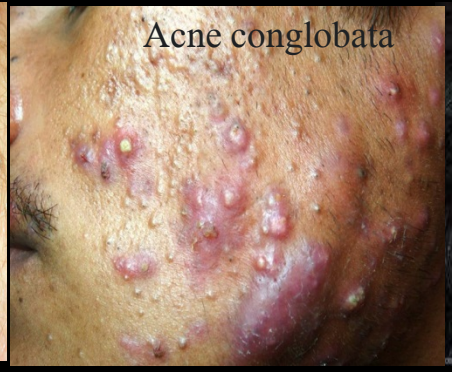

D@nderm

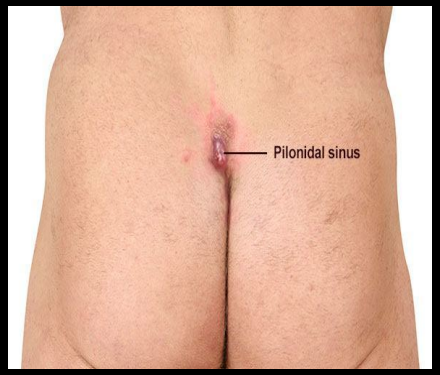


ASSOCIATED FINDINGS

- The follicular occlusion tetrad including:
  - Extensive acne vulgaris (conglobata variety).
  - Perifolliculitis of the scalp.
  - Pilonidal sinus.

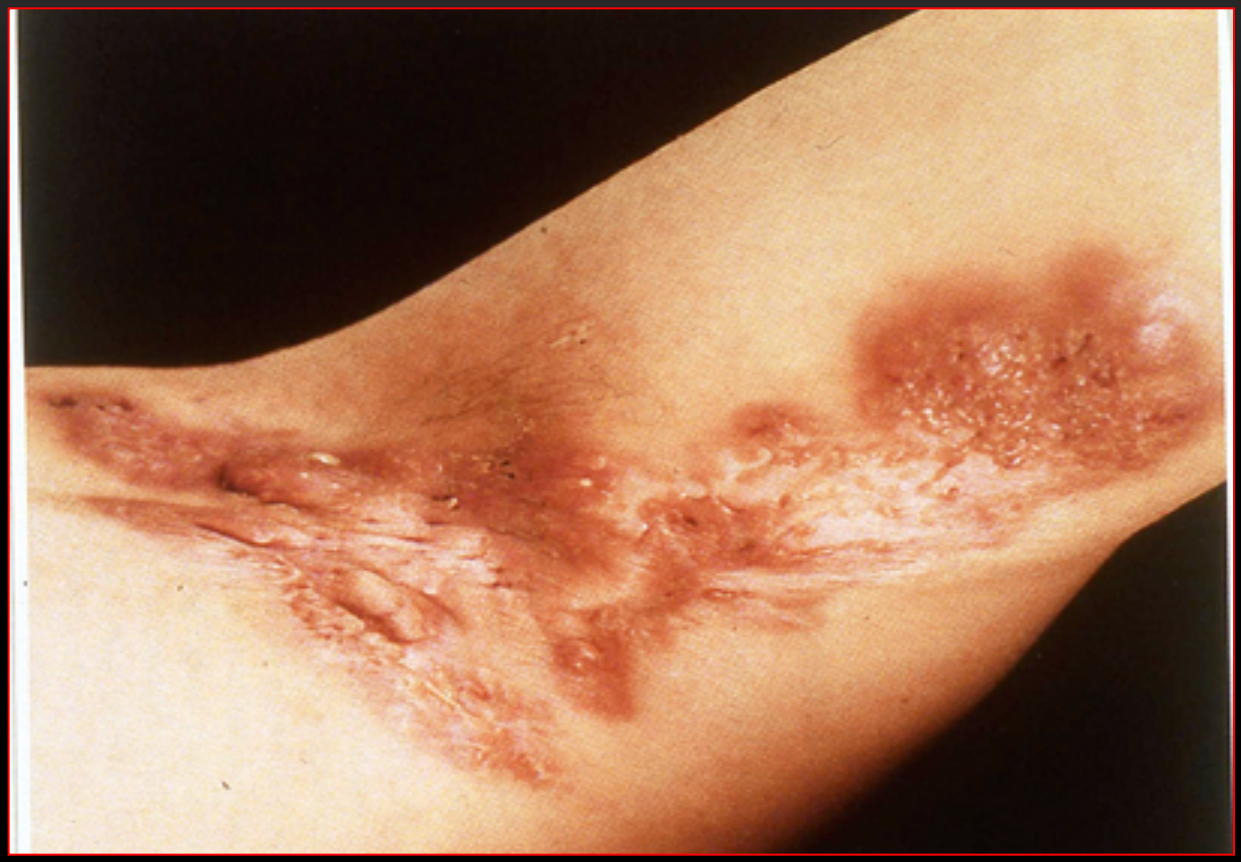




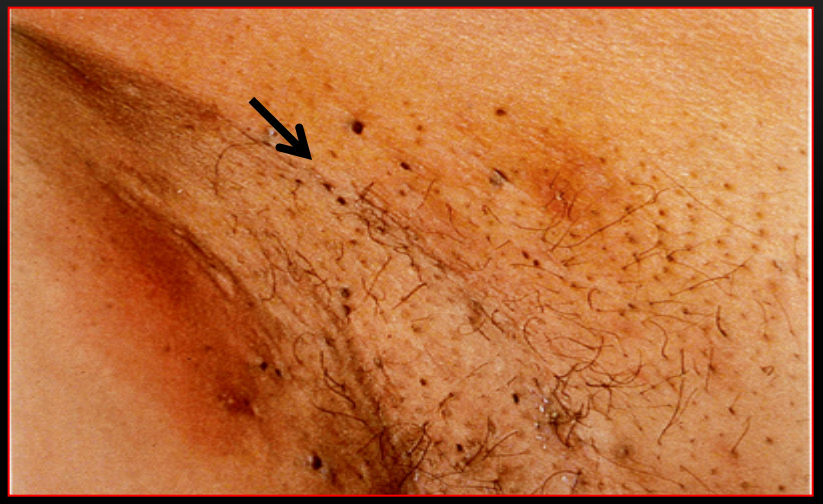


ASSOCIATED FINDINGS

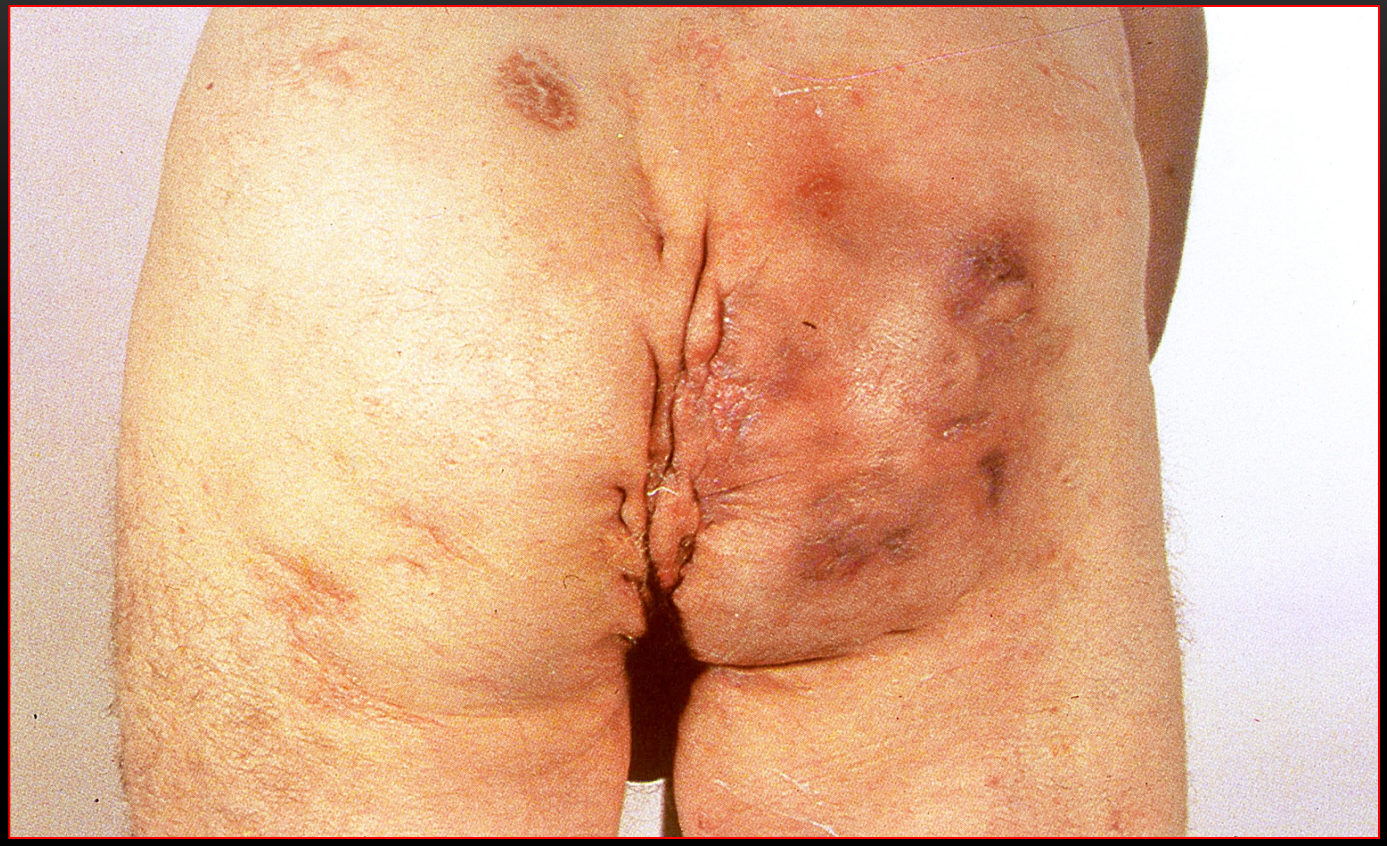
- Crohn's disease in 39% of patients.
- Irritable bowel syndrome.
- Sjogren syndrome.



- Sinuses, nodules, connecting tracts



- Double headed comedones



- Tracts , sinuses

TREATMENT

General measures:

- Practicing proper hygiene.
- Using soaps and antiseptic and antiperspirant agents.
- Using warm compresses.
- Wearing loose-fitting clothing.
- Smoking cessation.
- Weight reduction.
- Pain management by paracetamol.

TREATMENT

Medical :

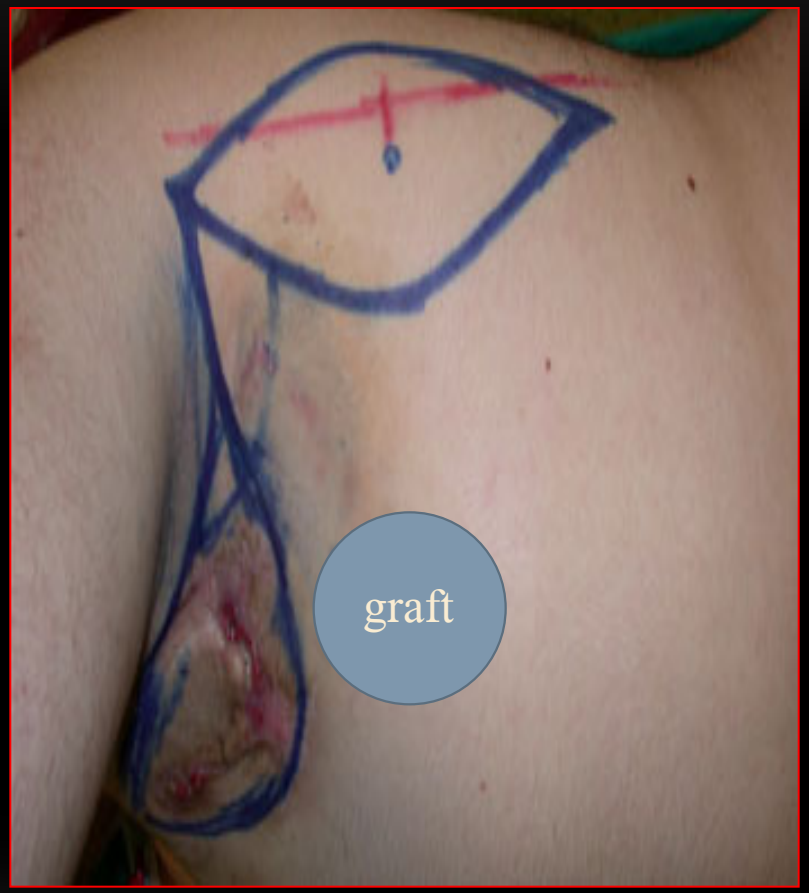
- Intralesional triamcinolone acetonide for acute lesions

- Antibiotics (minocycline , doxycyclin clindamycin, rifampicin, metronidazole)
- Retinoids (Acitretin better than isotretinoin
- Antiandrogens.
- Biological therapy (infliximab, adalimumab)

TREATMENT

Surgical:

- Incision and drainage of abscess better avoided
- Excision of sinus tracts and chronic nodules
- Complete excision of the area and grafting.
- CO_2 laser.




Have a
Good
Day!