



Acne Treatment and Therapeutic Strategies

The Aga Khan University Hospital, Karachi

Acné

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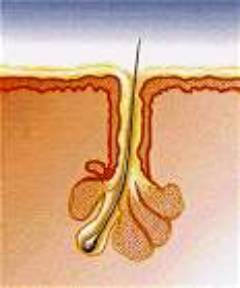


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- One of the most common skin diseases presenting to family physicians
- Considerable psychological impact on the quality of life
- No cure, but the disease can be controlled through medications



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Pathophysiology

Four important factors

- ✚ plugging of the hair follicle
- ✚ hyperactivity of the sebaceous gland
- ✚ proliferation of Propionobacterium
Acnes
- ✚ inflammation

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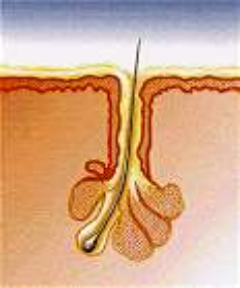
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Stages of Development



(A) Normal follicle; (B) open comedone (blackhead);
(C) closed comedone (whitehead); (D) papule; (E) pustule.



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Comedonal Lesions





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Inflammatory Lesions





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Nodulocystic Lesions





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Scarring





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Patient Evaluation

Key Elements in History

- ✚ previous medications used
- ✚ current products being used for acne
- ✚ medical problems
- ✚ other medications
- ✚ use of cosmetics or hair pomades
- ✚ recreational activities and occupation



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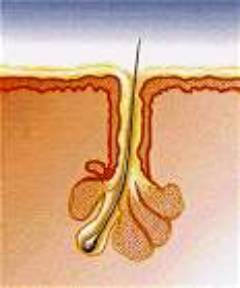
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Patient Evaluation

For Female Patients

- ✚ menstrual history
- ✚ hirsutism
- ✚ use of hormonal contraceptives



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Management

Patient Education (Dispelling Myths)

- hygiene
- diet
- cosmetics
- hair styles



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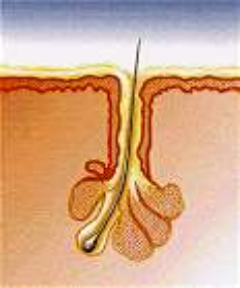
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Management

Patient Education

- ✚ washing of lesions
- ✚ picking lesions
- ✚ premenstrual flare
- ✚ hair care products



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Management

Patient Education

- ✚ improvement is not overnight
- ✚ treatment must be used regularly
- ✚ treatment is long term



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Management

Topical Therapy (Indications)

- ✚ comedonal acne
- ✚ mild to moderate inflammatory acne



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Management

Topical Therapy (Basic Rules)

- ✚ avoid applying medication right after washing face
- ✚ avoid over use of medication
- ✚ apply on all acne prone areas
- ✚ if face gets dry apply oil free moisturizer



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Management

Topical Therapy (Treatment Vehicle)

- ✚ cream → sensitive or dry skin
- ✚ lotion → any skin type
- ✚ gel → oily skin
- ✚ solution → oily skin



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Management

Topical Therapy (Anti Comedonal Agents)

- ✚ Topical Retinoids
- ✚ Azelaic acid
- ✚ Salicylic acid



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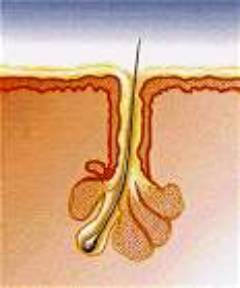
Management

Topical Retinoids 0.025% - 0.5% (application)

- ✚ apply at night
- ✚ always apply test dose
- ✚ start at low concentrations
- ✚ avoid in pregnancy

Avoid in Pregnancy





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Topical Retinoids 0.025% - 0.1% (side effects)

- ✚ pustular flare
- ✚ photosensitivity
- ✚ skin irritation and erythema
- ✚ dryness and peeling



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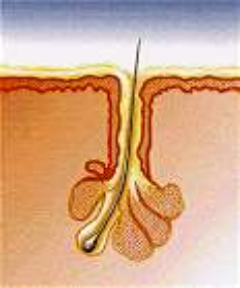
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Management

Azelaic Acid 20%

(application and side effects)

- ✚ applied twice daily
- ✚ erythema and irritation
- ✚ decrease in pigmentation



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Salicylic Acid 0.5 - 2%

(application and side effects)

- ✚ applied twice daily
- ✚ skin dryness and irritation



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Management

Topical Therapy (Anti Inflammatory Agents)

■ Benzoyl Peroxide

■ Topical antibiotics



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Management

Benzoyl Peroxide 2.5 - 10%

(application and side effects)

✚ apply once to twice daily

✚ always apply test dose

✚ avoid use at night

✚ dryness of skin



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Management

Topical Antibiotics, Clindamycin and Erythromycin (application and side effects)

✚ apply twice daily

✚ skin dryness



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Management

Combination therapy

- ✚ 5% Benzoyl Peroxide and 3% Erythromycin
- ✚ 5% Benzoyl Peroxide and 1% Clindamycin
- ✚ Topical antibiotics and Azelaic acid or Tretinoin



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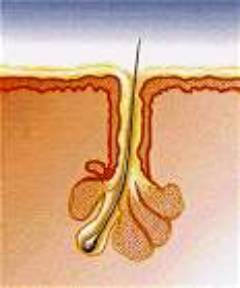
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Management

Systemic therapy (Indications)

- ✚ moderate inflammatory acne non responsive to topical therapy
- ✚ nodulocystic acne



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Management

Systemic therapy

- ✚ Oral Antibiotics
- ✚ Isotretinoin
- ✚ Hormonal Therapy



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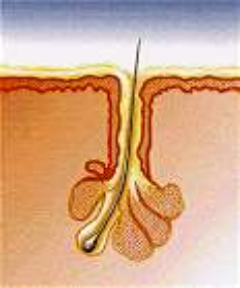
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Oral Antibiotics (used for 3-6 months)

- ✚ Tetracycline 500mg X BD
- ✚ Doxycycline 100mg X BD
- ✚ Minocycline 100mg X OD
- ✚ Eythromycin 500mg X BD
- ✚ combined with topical therapy



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Isotretinoin (Accutane) indicated in

- severe nodulocystic acne
- non responsive acne
- severe psychological distress

Only to be used by physicians with experience in the therapy of severe dermatological disorders



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Management

Isotretinoin (RoAccutane) side effects

- ✚ teratogenic
- ✚ mucosal dryness
- ✚ photosensitivity
- ✚ arthralgias
- ✚ alteration of liver enzymes
- ✚ hypertriglyceridemia and hypercholesterolemia



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Hormonal Therapy indicated in

- ✚ acne associated with hirsutism, menstrual irregularity and alopecia
- ✚ women desiring contraception



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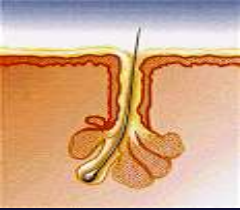
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Hormonal Therapy

- ✚ Oral contraceptives containing low androgenic progesterone
- ✚ Cyproterone Acetate
- ✚ Spironolactone

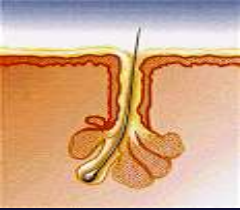


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Lesion Type(s)

Comedonal
lesions



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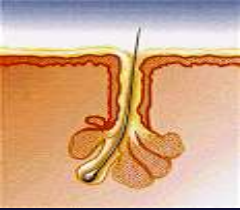
Lesion Type(s)

Comedonal
lesions

Topical
retinoid

Azelaic acid

Salicylic acid



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Lesion Type(s)

Comedonal lesions

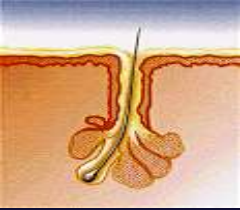
Topical retinoid

Azelaic acid

Salicylic acid

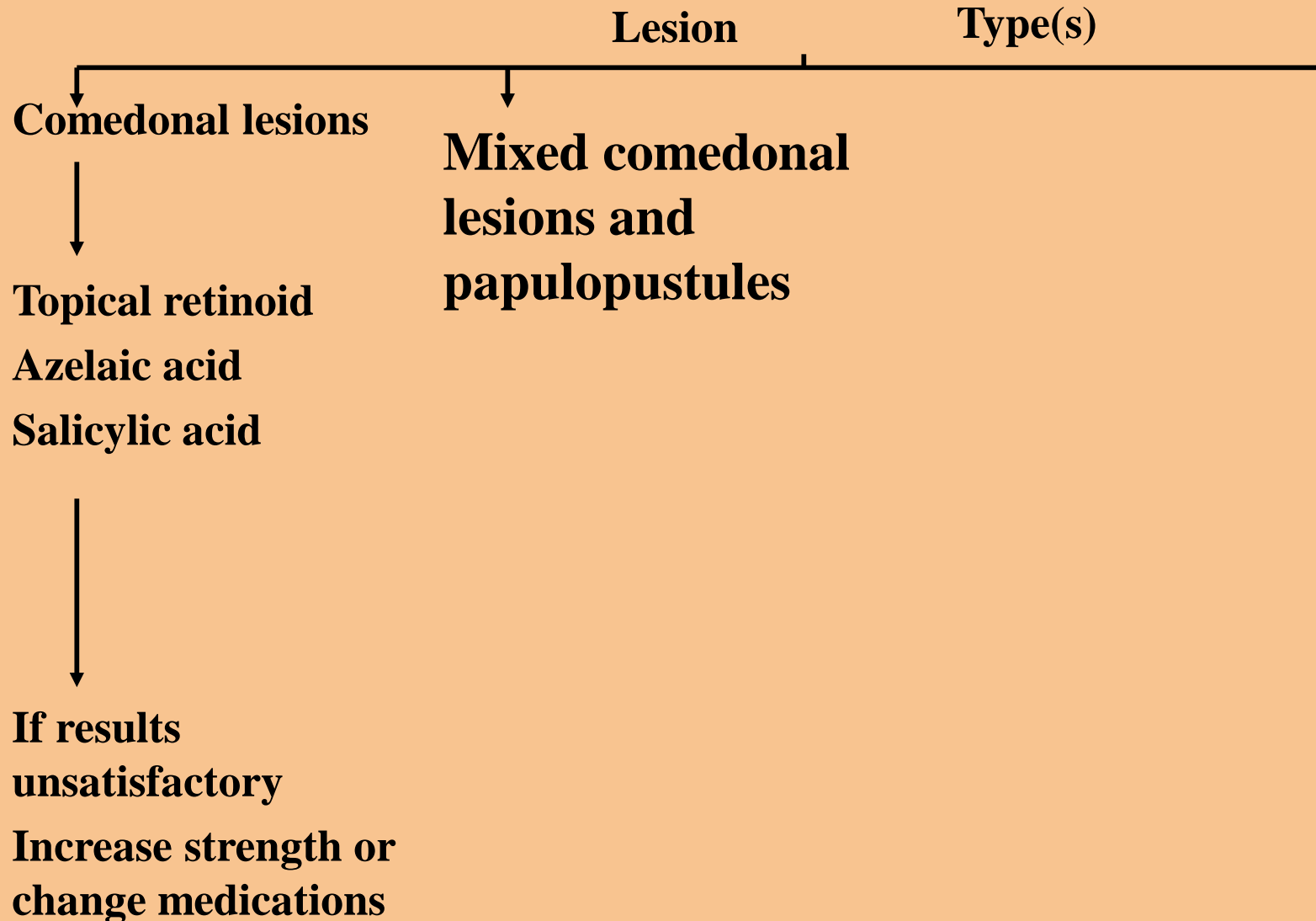
**If results
unsatisfactory**

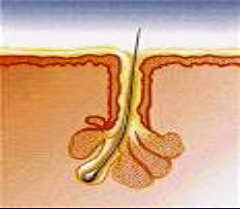
**Increase strength
or change
medications**



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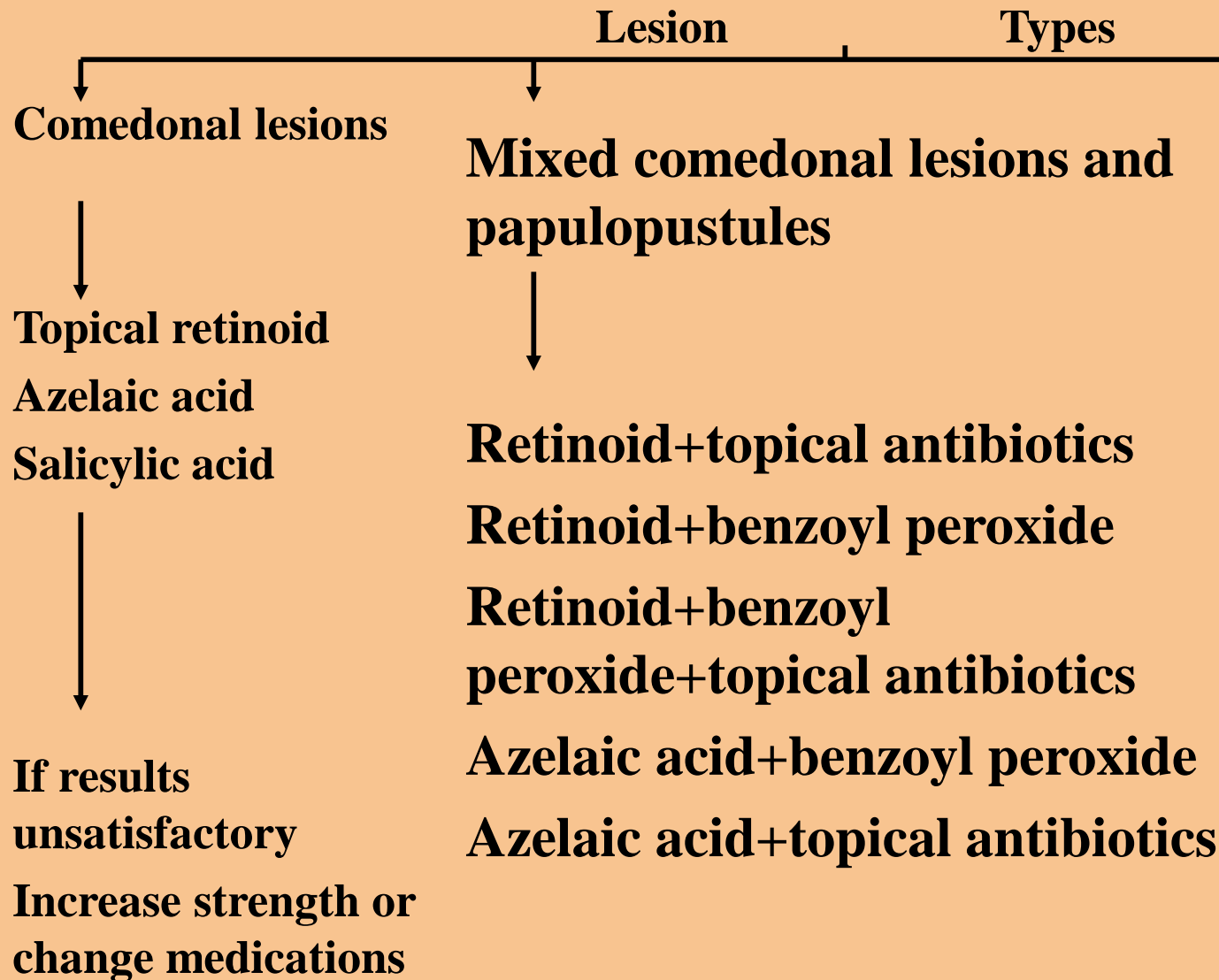
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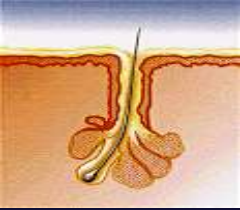




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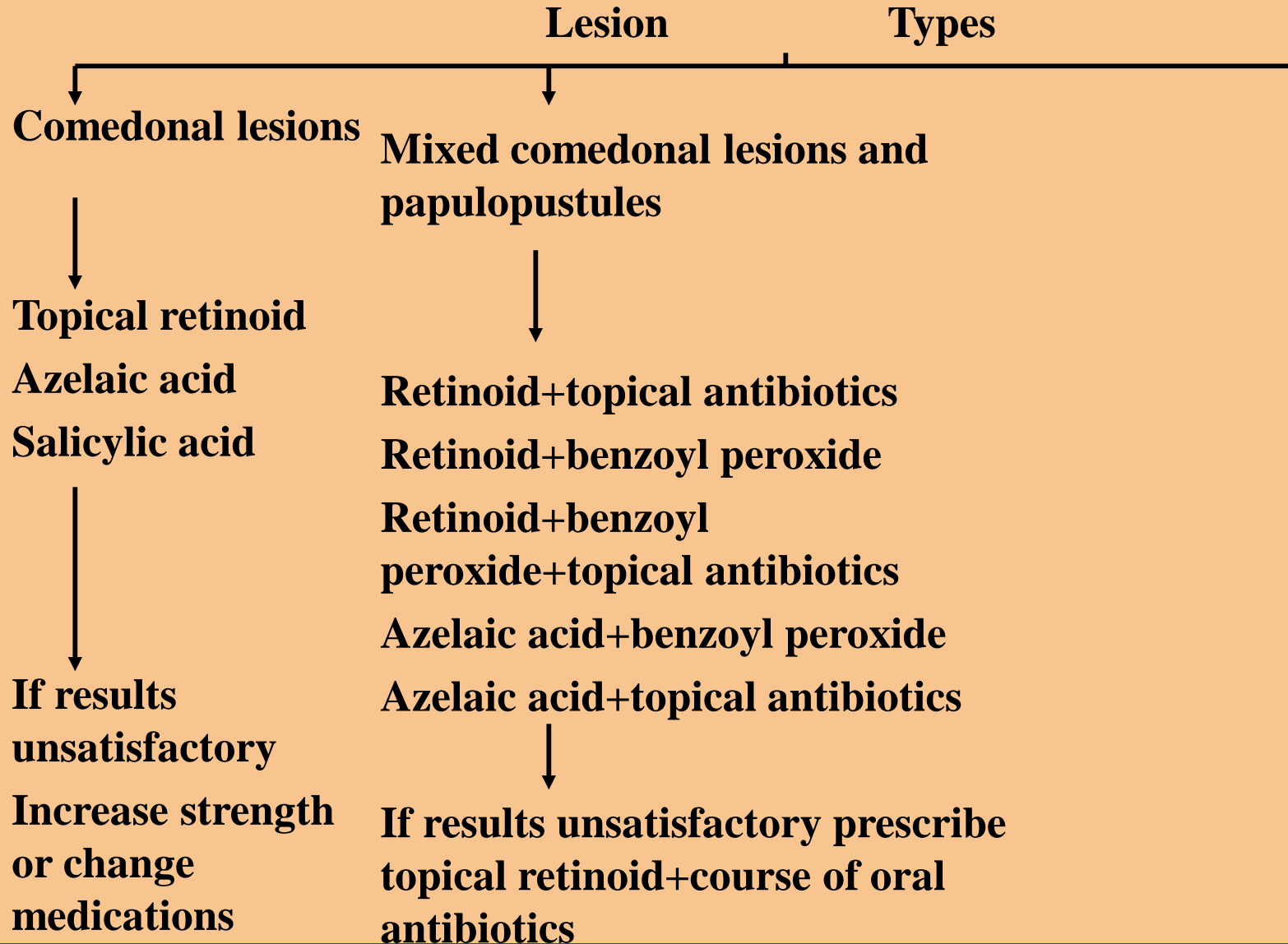
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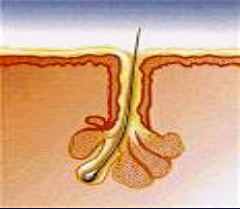




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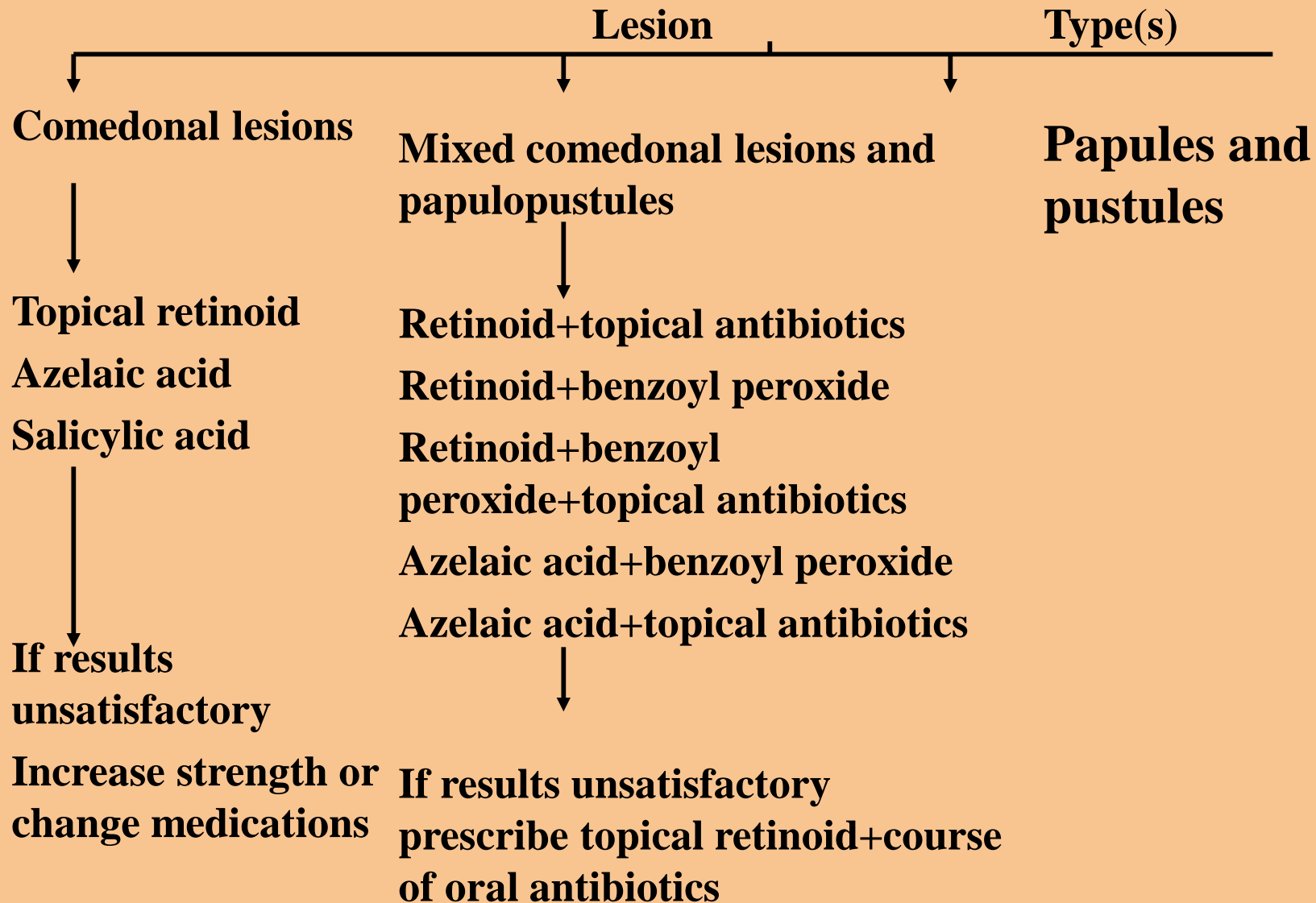
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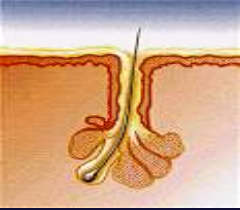




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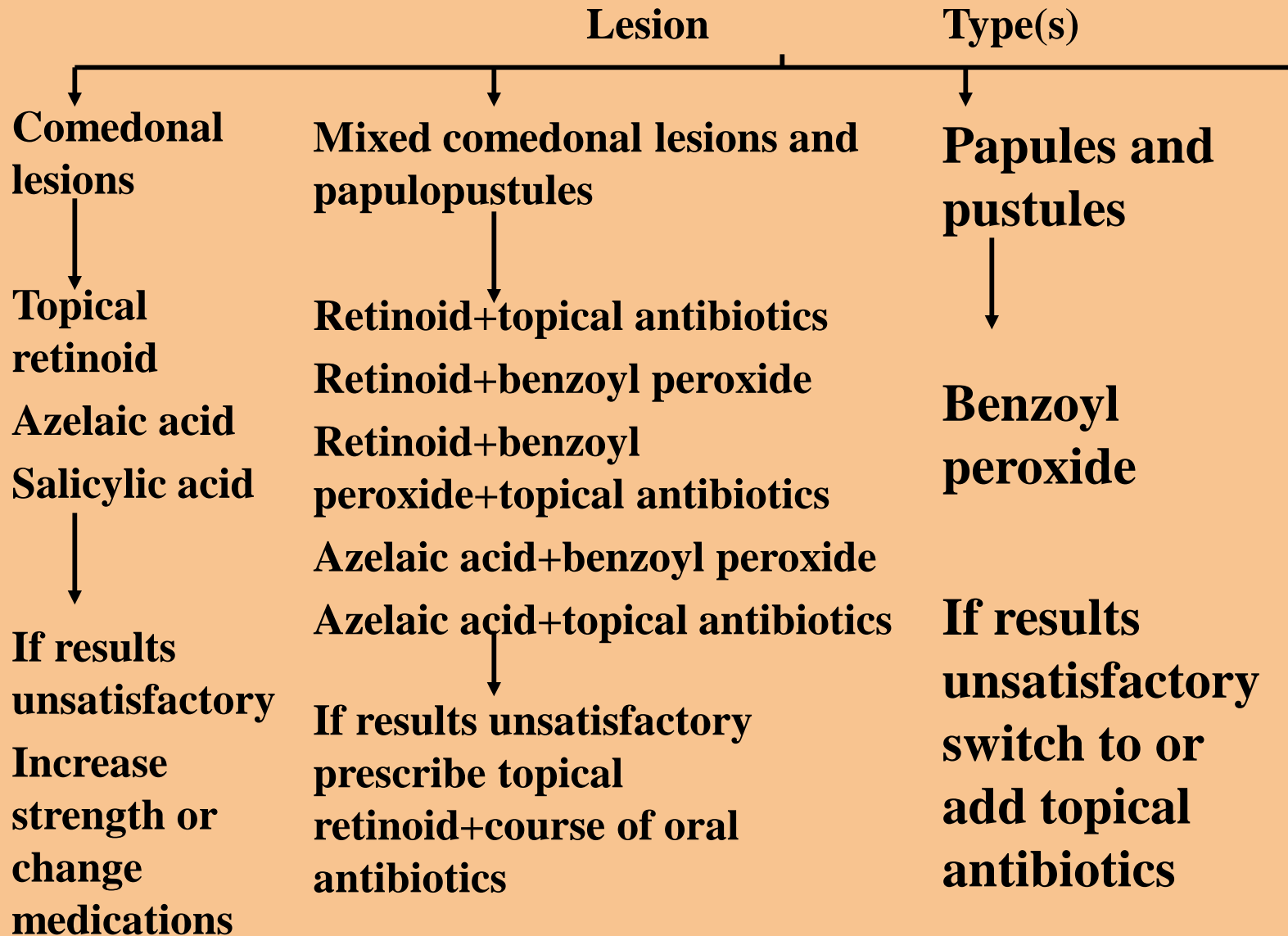
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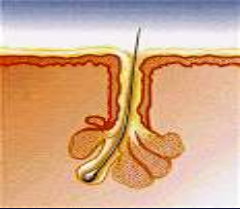




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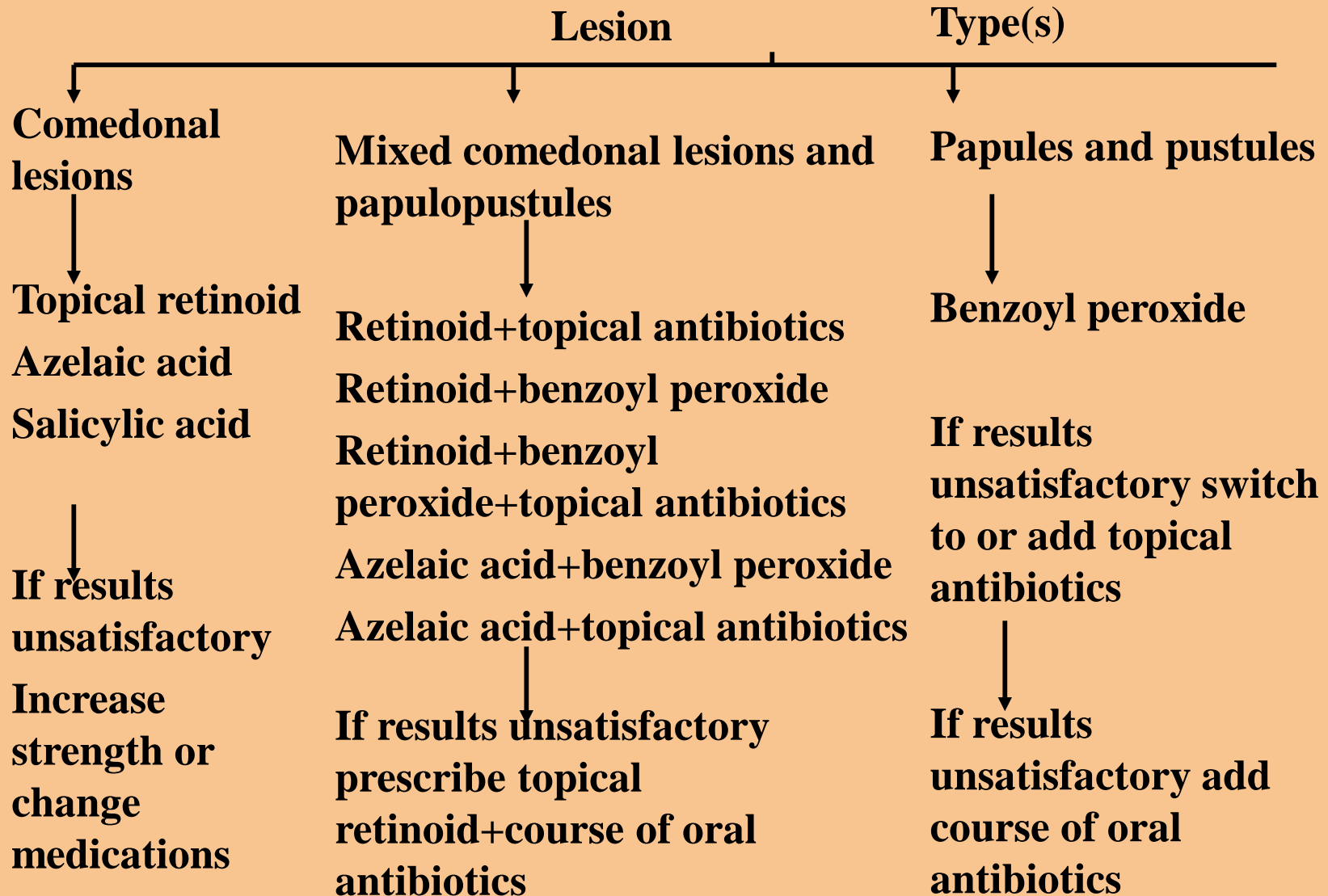
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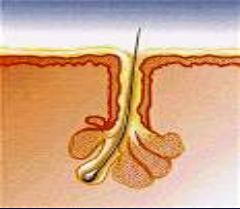




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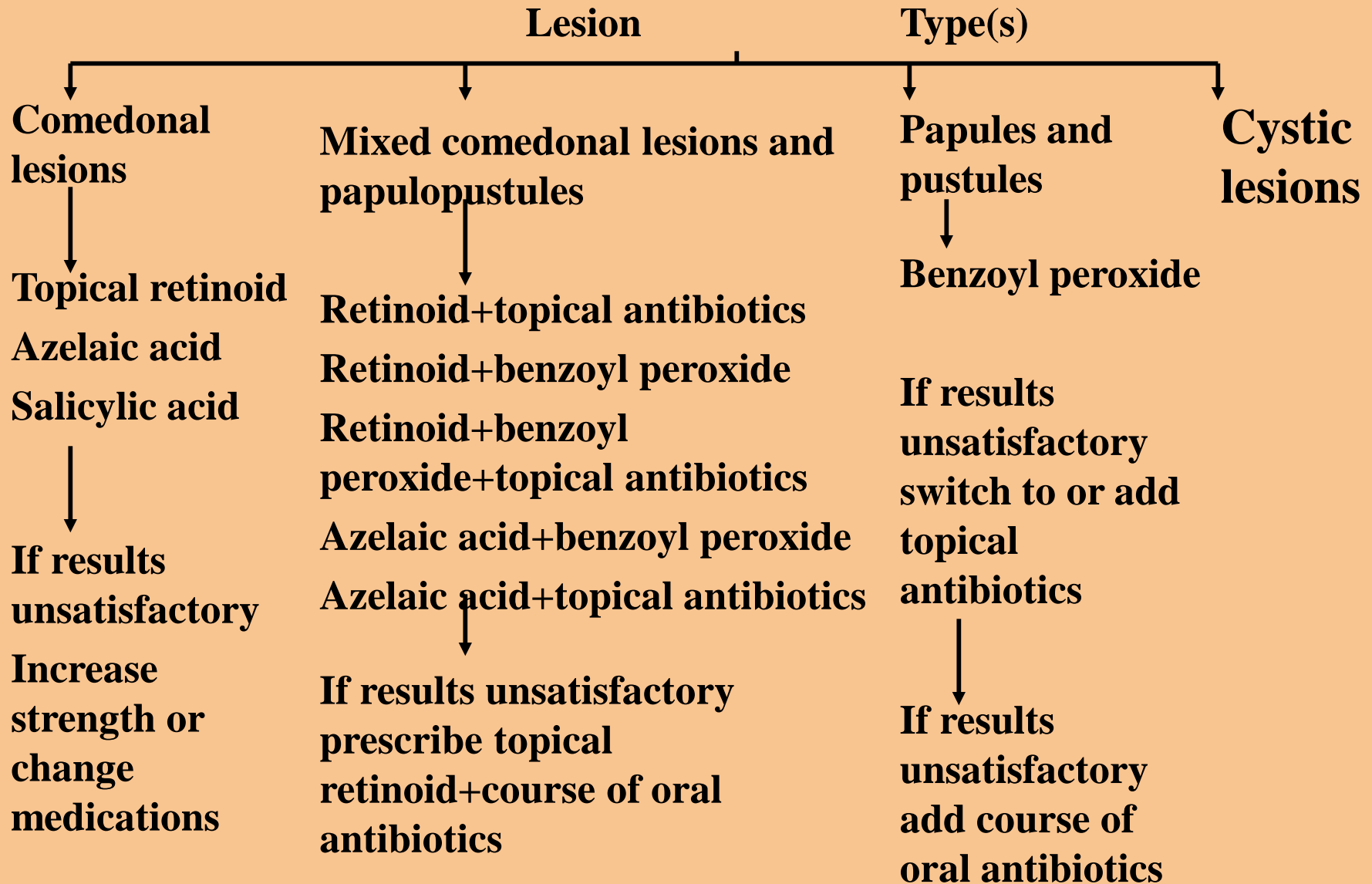
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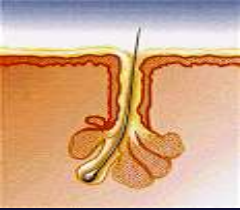




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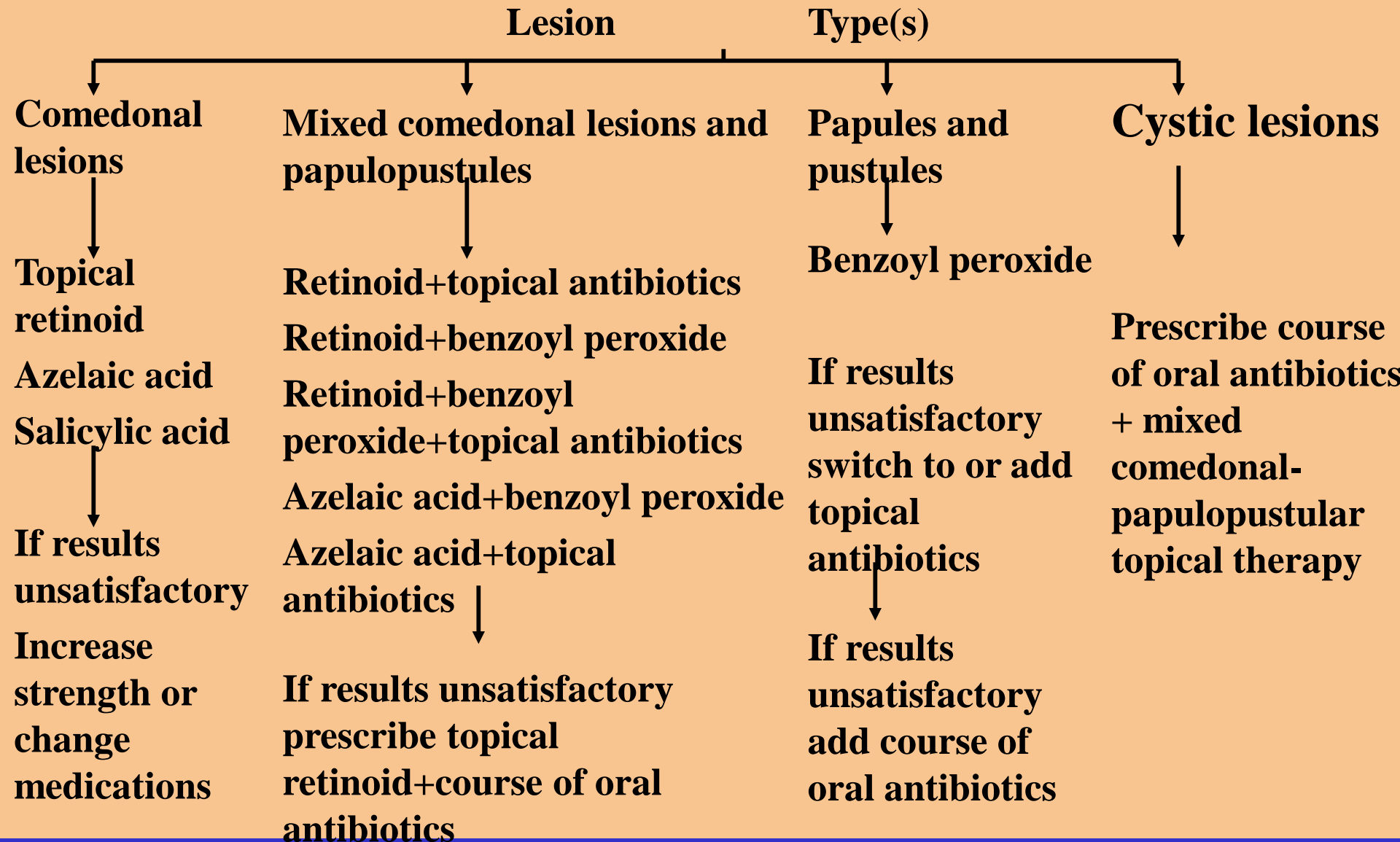
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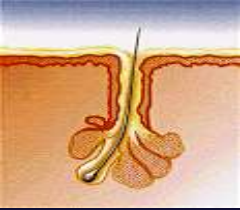




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