

ACNE

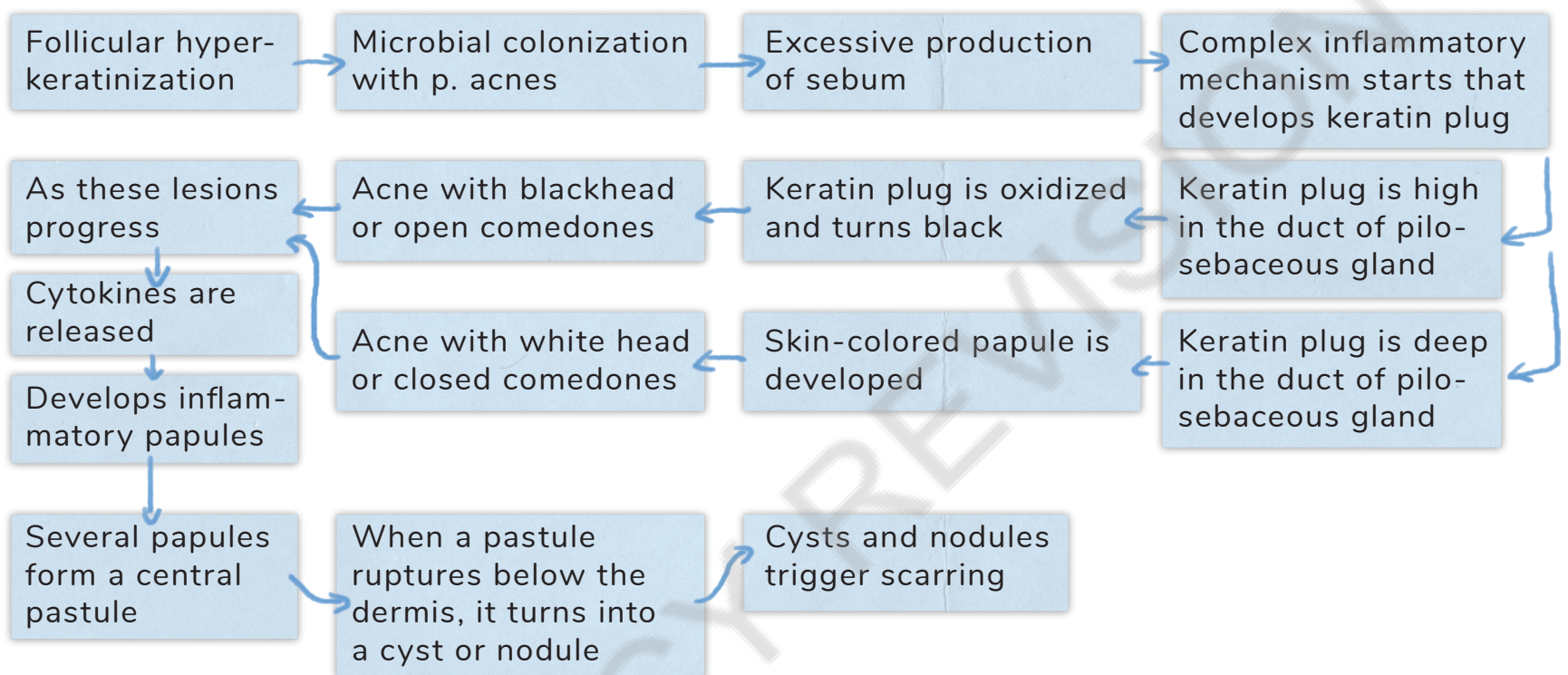
1. Background

- Most common skin disorder
- Starts at puberty
- Acne can cause emotional, sometimes permanent, psychological disturbance
- Multifactorial disease centered on the pilosebaceous gland
- Acne may have link with high glycemic diet & dairy ingestion
- Astringents and abrasives to be avoided

2. Goals

- Clear existing lesions
- Prevent new lesions
- Minimize scarring
- Reduce dyspigmentation
- Minimize psychological impact

3. Pathophysiology



4. Therapeutics

Clinical diagnosis of Acne

Signs of hyperandrogenism present?

- Hirsutism
- Infertility
- Irregular/infrequent menses
- Insulin resistance
- Middle age onset in women

YES

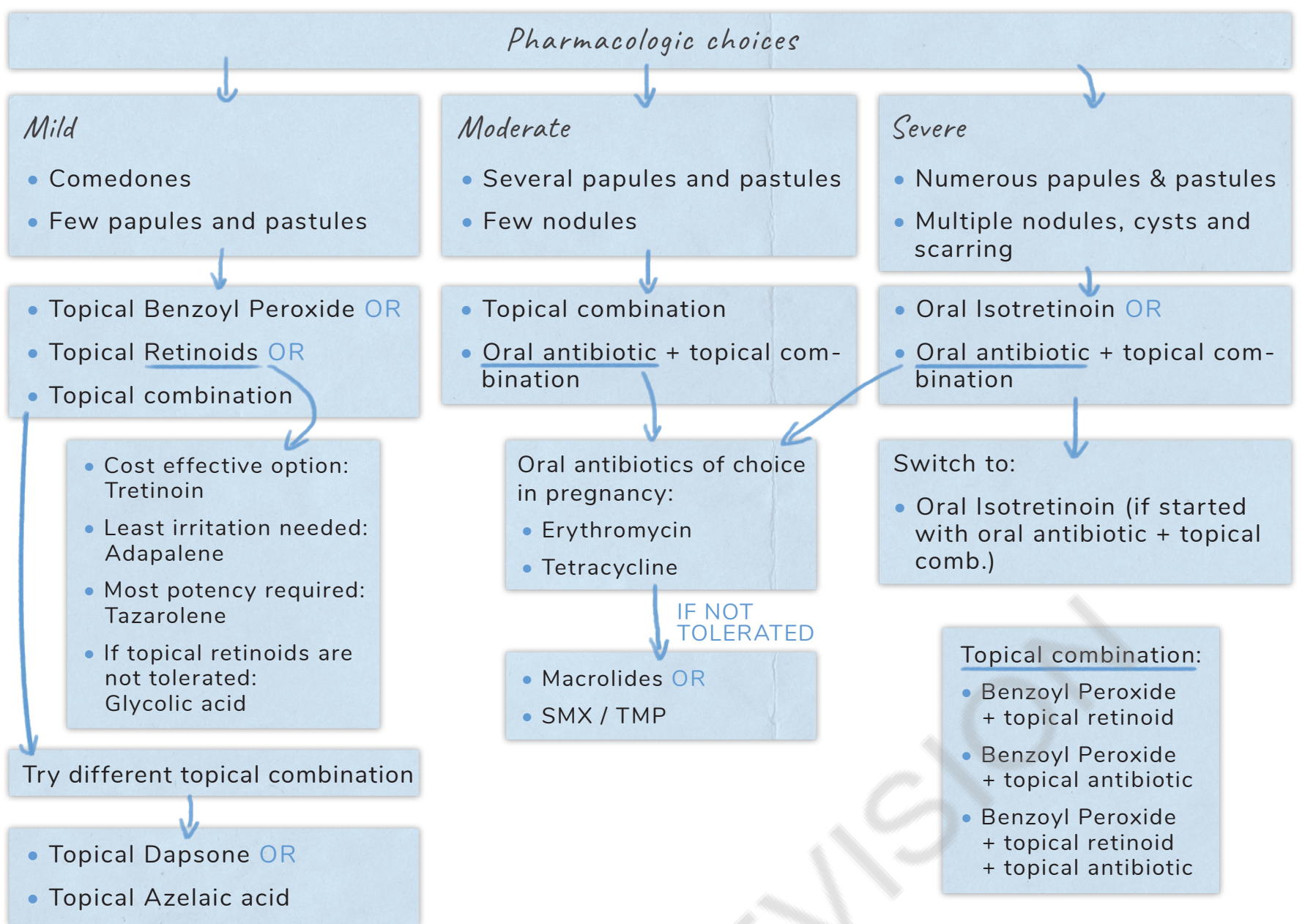
Hormonal investigation may be warranted

Pharmacologic choices

- For papulopustular acne: Benz. Peroxide + Clinda
- For stubborn module/cyst: Intralesional triamcinolone injection
- To reduce hyperpigmentation: Azelaic acid
- For most powerful action, sustained remission: Isotretinoin
- Patients who notice flare up of acne associated with menses: OCPs containing Cyproterone or Drospirenon, Spironolactone

Non-pharm choices

- Dietary changes: avoid high glycemic diet and dairy products
- Avoid picking, squeezing and excoriation of inflammatory lesions
- Ongoing use of lasers, intense pulsed light, microdermabrasion, chemical peels, photodynamic therapy and comedone extraction are helpful in certain situations



5. Drug summary

Topical agents

- Benzoyl Peroxide
- Azelaic acid
- Glycolic acid
- Salicylic acid
- Intralesional triamcinolone injection
- Retinoids
 - Tretinoin
 - Tazarolene
 - Adapalene
- Clindamycin
- Erythromycin

Systemic agents

- Tetracycline
 - Doxycycline
 - Minocycline
 - Tetracycline
- Macrolides
- SMX / TMP
- OCPs containing antiandrogens
 - Cyproterone
 - Drospirenone
- Spironolactone (as an antiandrogen)
- Isotretinoin

6. Pregnancy & breastfeeding

Pre-pregnancy

- **Isotretinoin**
Wait until 1 month after discontinuation
At least 2 negative pregnancy tests before starting therapy
- **Contraceptives**
Wait until one spontaneous cycle after discontinuation
- **Spironolactone**
Wait until 7 days after discontinuation of treatment
- **Tetracycline**
Wait until 7 days after discontinuation of therapy

Pregnancy

Compatible:

- Benzoyl Peroxide top.
- Erythromycin oral/top. (except Estolate)
- Clindamycin top.

Unlikely to pose a risk (R/B ratio):

- Glycolic acid
- Azelaic acid
- Triamcinolone

NOT compatible:

- Dapsone top.
- Retinoids top.
- Isotretinoin top.
Proven teratogen
- Tetracycline
Dental staining & enamel hypoplasia
- SMX / TMP
Ped risk of kernicterus if given after 32 weeks of pregnancy

Breast feeding

Compatible:

- Retinoids top.
- Antibiotics top.
- Benzoyl Peroxide top.
- Glycolic acid top.
- Azelaic acid top.
- Tetracycline
3 weeks
Daily use not recommended
- Spironolactone

R/B ratio:

- Dapsone top.
- Erythromycin oral
Ped risk of infantile pyloric stenosis in early postnatal period

NOT compatible:

- Isotretinoin top.
- SMX / TMP
Potential risk of hemolysis in G6PD deficient patients
- OCPs

7. Important notes

- To reduce irritation from topical formulation:
 - Start with less frequency (every 2 days or less)
 - Shorter contact time (for 2 hours, then wash off)
 - Slowly increase the dose
 - Use moisturizer
- Relationship between acne and diet is controversial
- It can take 2-3 months to see significant improvement with topical/systemic antiacne agents
- Patients on combination of topical & systemic therapy who achieved good control: consider withdrawal of the systemic agent and continue the topical therapy
- Topical clinda always to be used with topical benz. peroxide to prevent resistance

Agents	Antibacterial act?	Comedolytic act?	Anti-inflammatory act?	Peeling act?
Benzoyl Peroxide	Yes	mild	No	No
Retinoids	No	powerful	Yes	No
Glycolic acid	No	mild	No	Yes
Azelaic acid	Yes	Yes	No	No
Salicylic acid	No	Yes	-	No
Dapsone	No	No	Yes	No
Clindamycin	Yes	No	No	No

- Triamcinolone can cause localized atrophy; not suitable for multiple lesions
- OCPs containing anti-androgenic agents have higher risk of VTE
- Patient's acne continues to improve after a course of Isotretinoin is completed, wait at least 8 weeks before starting another course (one course is for 4-6 weeks)