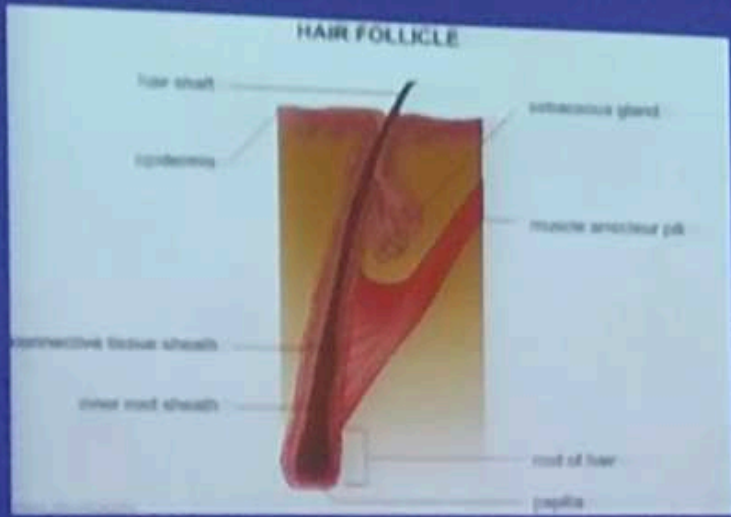
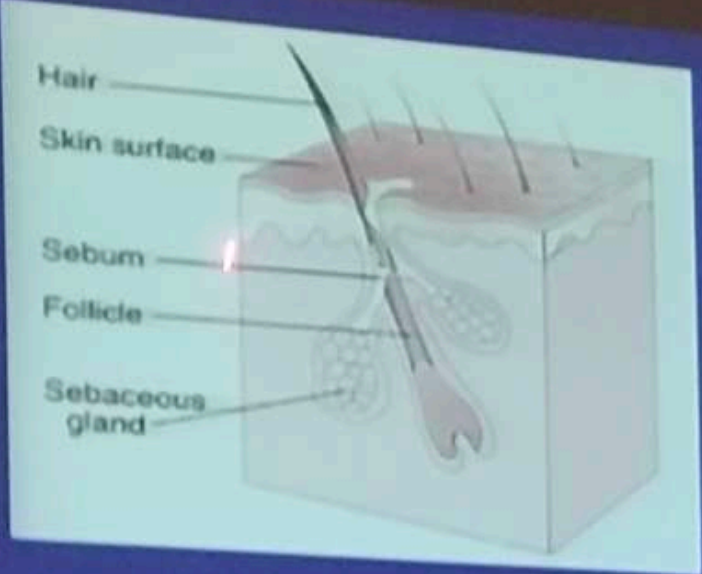


Acne Vulgaris

Dr. Ayesha Jamil



Definition

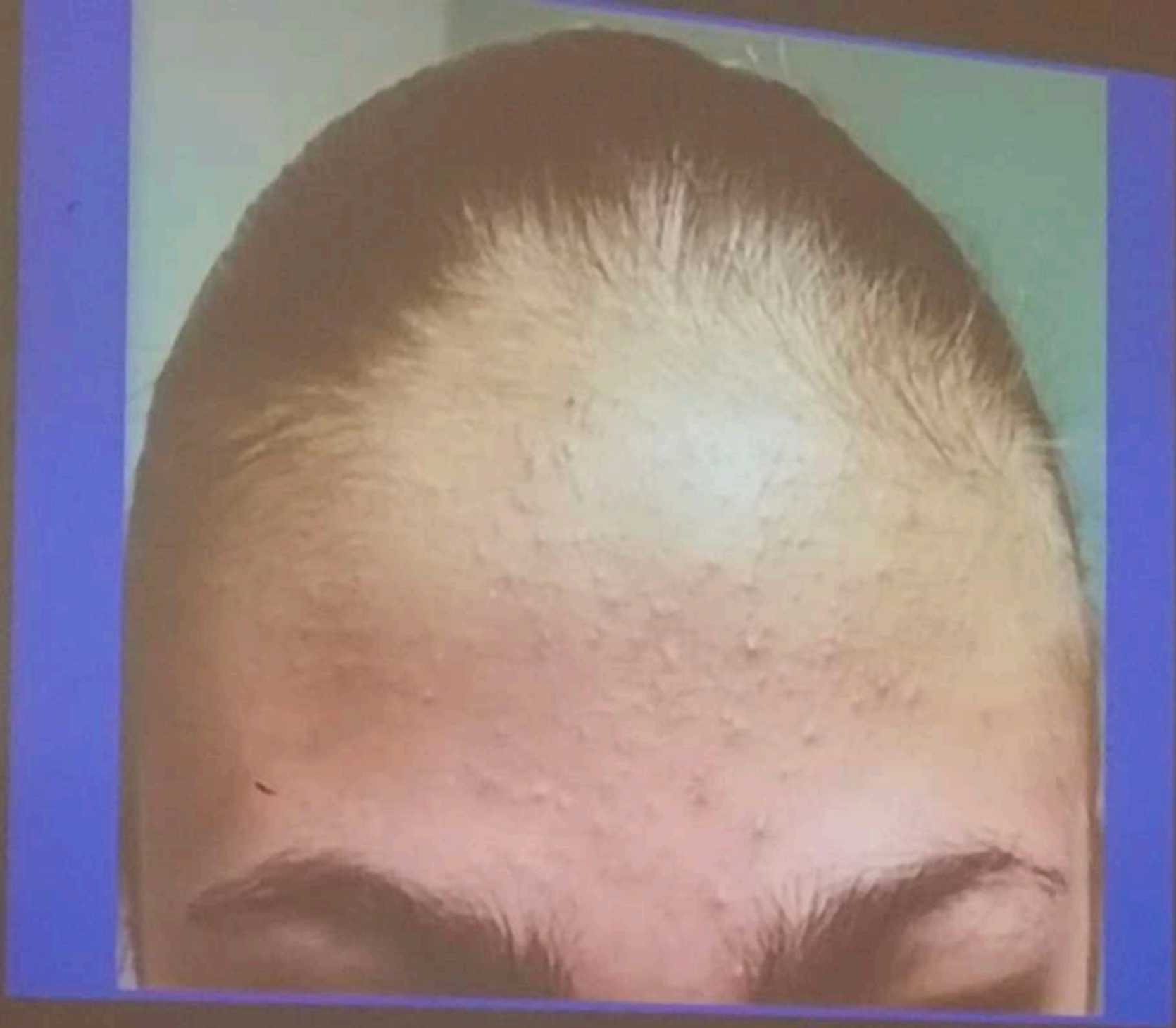
- Chronic inflammatory disease of pilosebaceous follicle characterized by non-inflammatory (comedones) & by inflammatory lesions (red papules, pustules or nodules) Affects areas of skin with dense population of sebaceous glands (Face, upper chest, back)

Clinical Features

- Age
 - 12-35 years (commonly)
- Sites
 - Face (90%), Back (60%), Chest (15%)

Pathophysiology

- Pathogenesis is multifactorial
- Four Key Factors
 - Abnormal **ductal hyperproliferation** causing excessive keratin formation, obstructing duct and producing comedones
 - Excess **sebum production**
 - **Propionobacterium acnes** bacteria (presence & activity)
 - **Inflammation**

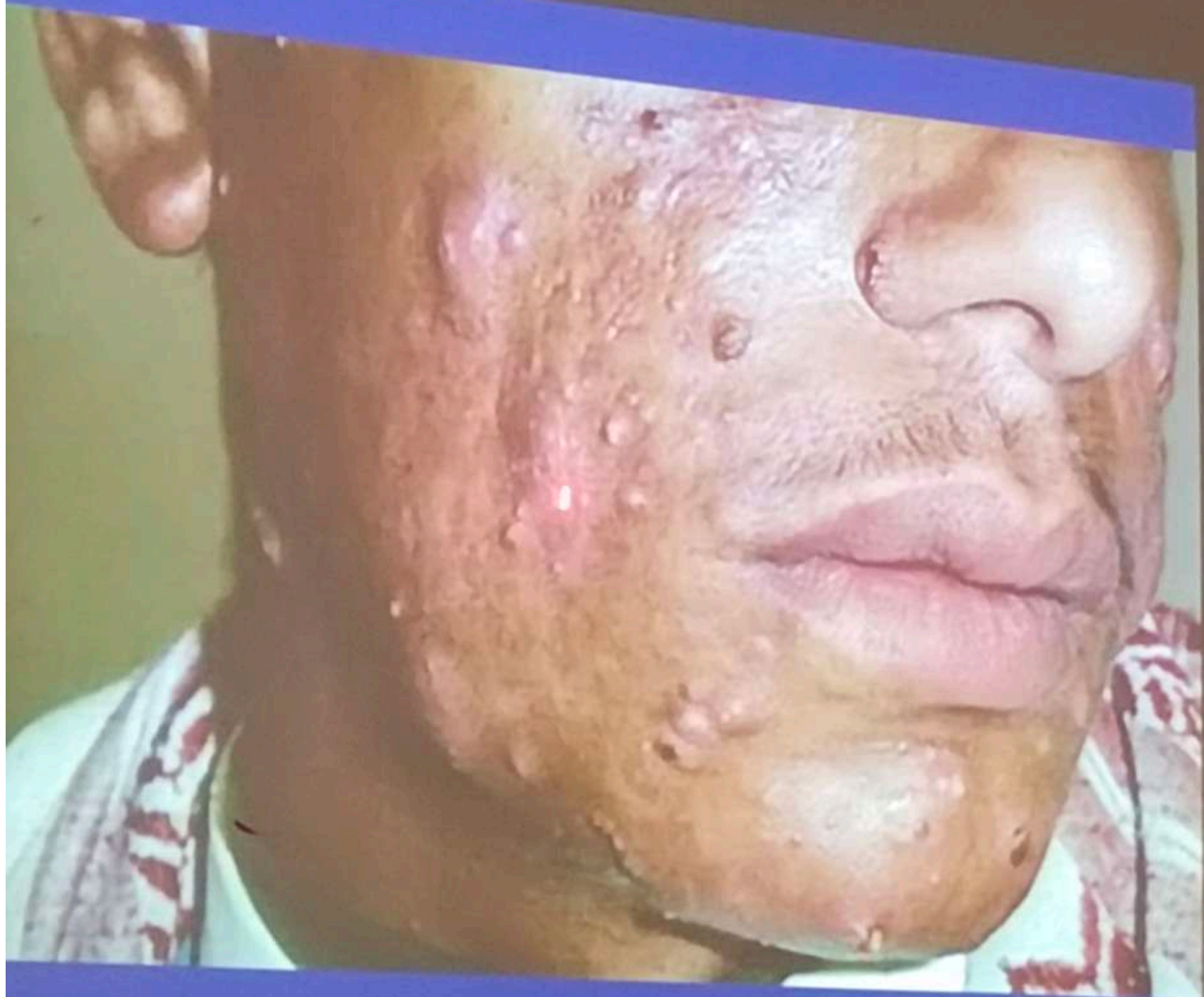




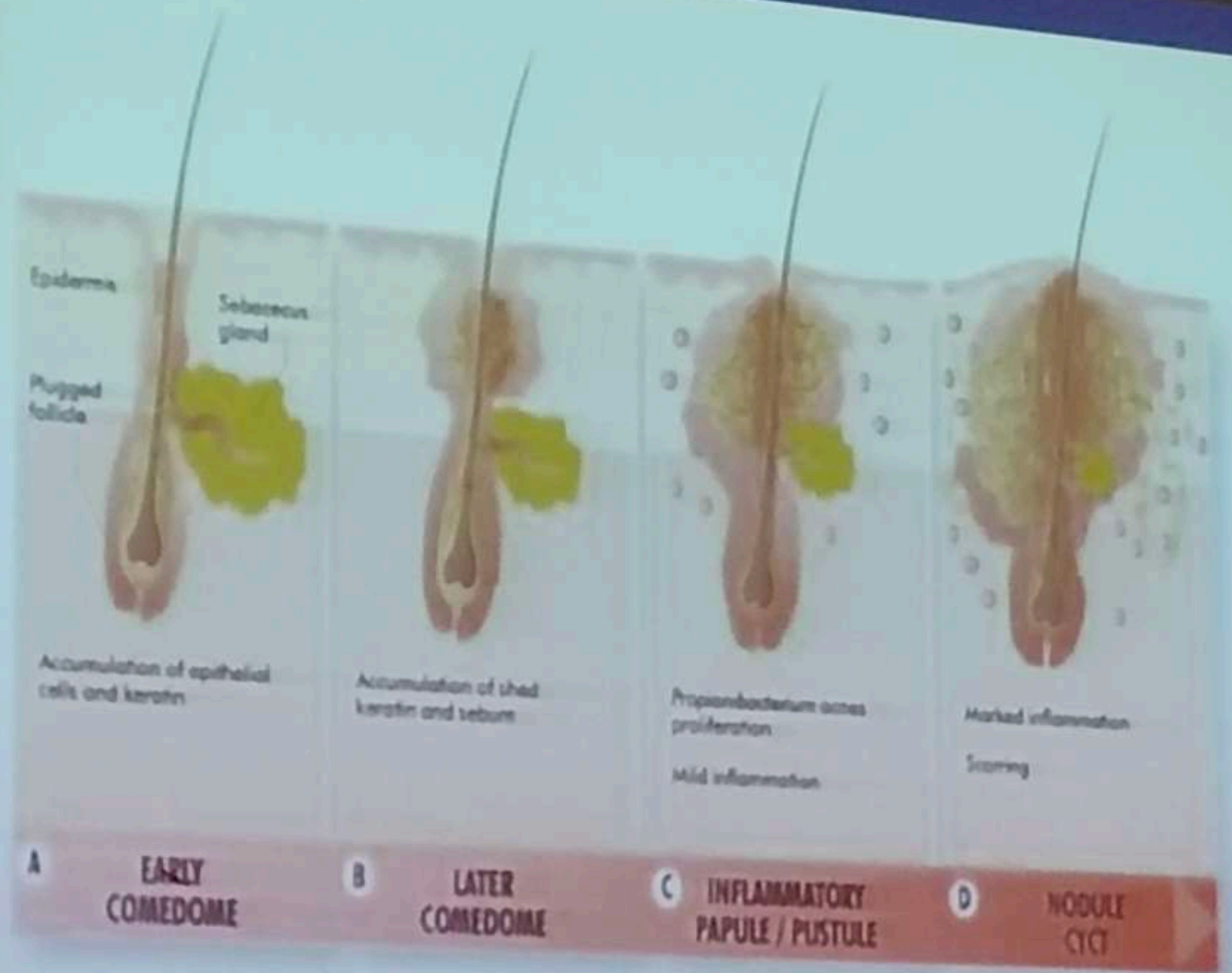


NOTICE
PATIENTS ARE REQUESTED
TO ARRIVE 15 MINUTES
BEFORE APPOINTMENT
TIME.
PLEASE DO NOT
SMOKE IN THIS
OFFICE.
THANK YOU FOR
YOUR PATIENCE.









Pathogenesis of Acne

Excessive Sebum production

- Different hormones & mediators regulate sebum production & excretion (Androgens, Growth Hormone, Insuline-like growth factor)
- End-organ hyper-responsiveness to hormones

Abnormal ductal hyperproliferation

- First recognized event
- Causes of hyper proliferation (Exact cause not known)
 - Androgen Hormones
 - Changes in lipid composition

P. Acnes

- Anaerobic organism
- Promotes inflammation through various means
 - Contain lipases..converts lipids into fatty acids. Fatty acid cause production of pro-inflammatory mediators(IL-2,IL-8,TNF)
 - Hypersensitivity to P. Acne

- Wall of distended follicle breaks
- contents (sebum, keratin, fatty acids, bacteria) enter into dermis
- leading to inflammatory reaction (papule, pustule and nodule)
- rupture and inflammation leads to scarring

Factors Influencing Acne

- Genetic
- Oily cosmetics, hair pomades
- drugs
 - Steroids, Lithium
 - Antiepileptics
 - Antituberculous
 - Iodides

Factors Influencing acne

- Diet
 - Scientific proof is lacking
 - Chocolate & diet restriction of no value
 - Foods with high glycemic index may aggravate

Factors Influencing Acne

- Pre-menstrual Flare
 - About 70% women complain of acne-flare 2-7 days premenstrually
 - Due to increase hydration of the duct
 - Pro-inflammatory effects of estrogens & progesterons

Factors Influencing Acne

- Occupation
 - Cooks
 - Patients dealing with oil industry

Factors Influencing Acne

- Endocrine disorders
 - Polycystic Ovary Syndrome
 - Congenital adrenal hyperplasia
 - Other endocrine disorders with excess androgens

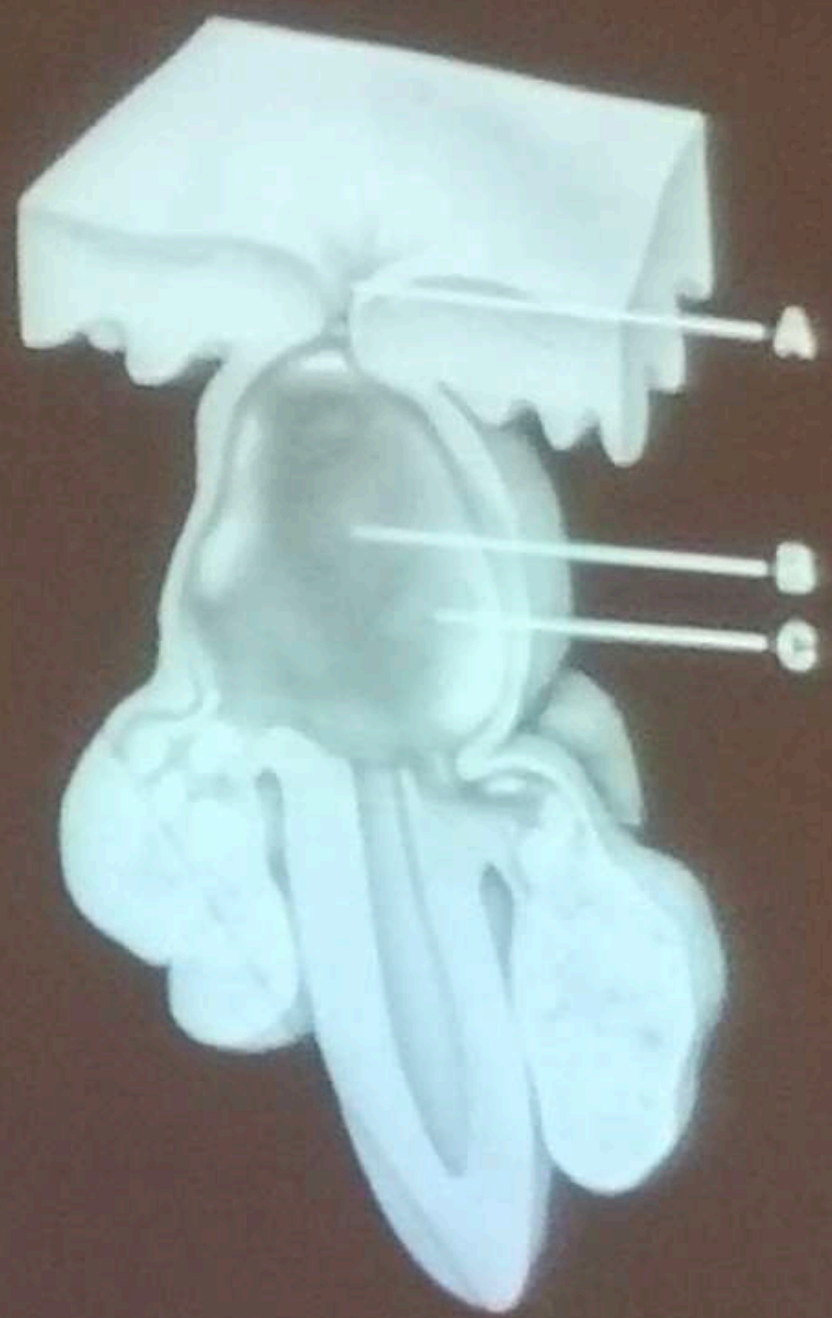
Factors Influencing Acne

- Occlusive Cosmetics/Hair Pomades
- Halogenated Hydrocarbons
- Heat/Humidity
- Excessive/Vigorous Washing
- Friction/Pressure
- Manipulation of Lesions

Clinical Features

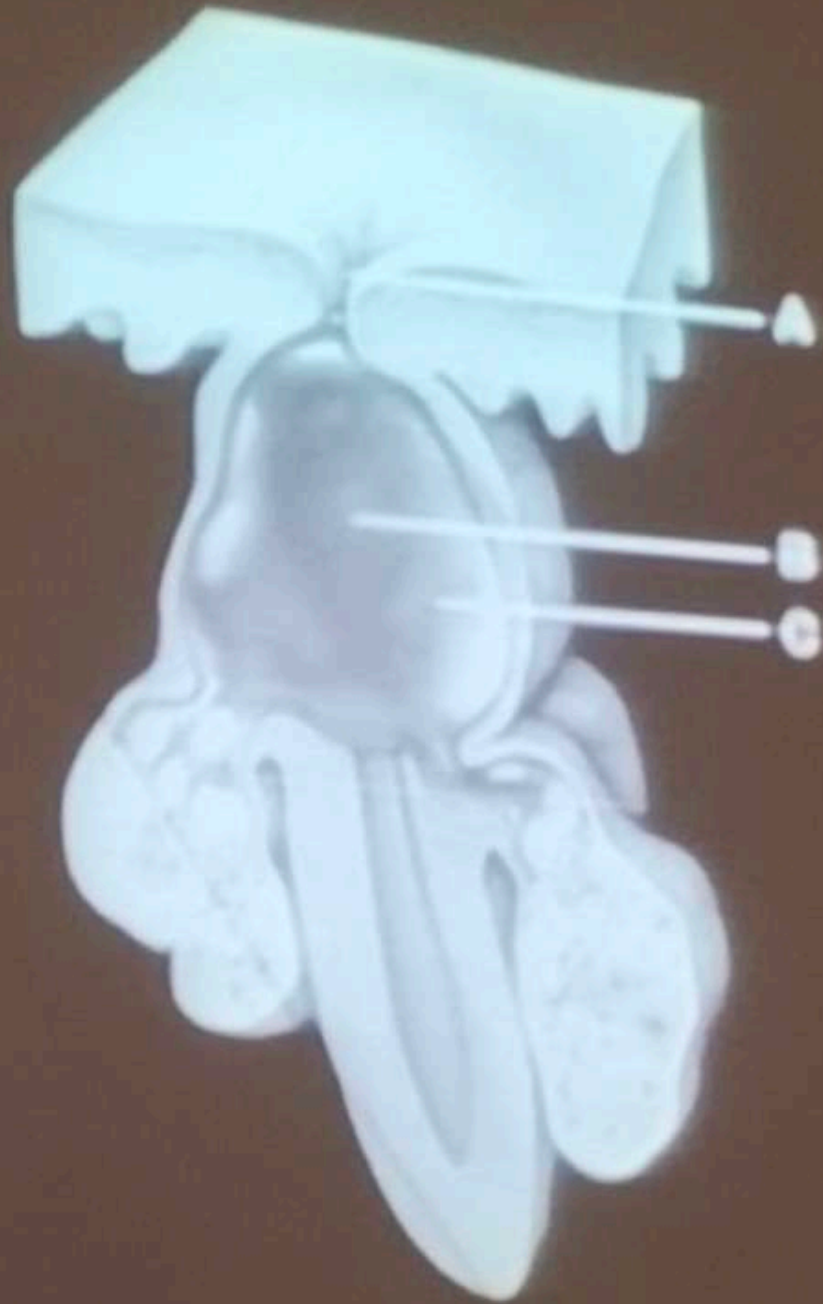
- Non-Inflammatory Lesions
 - Blackheads (Open Comedones)
 - Whiteheads (Closed Comedones)

Closed Comedone

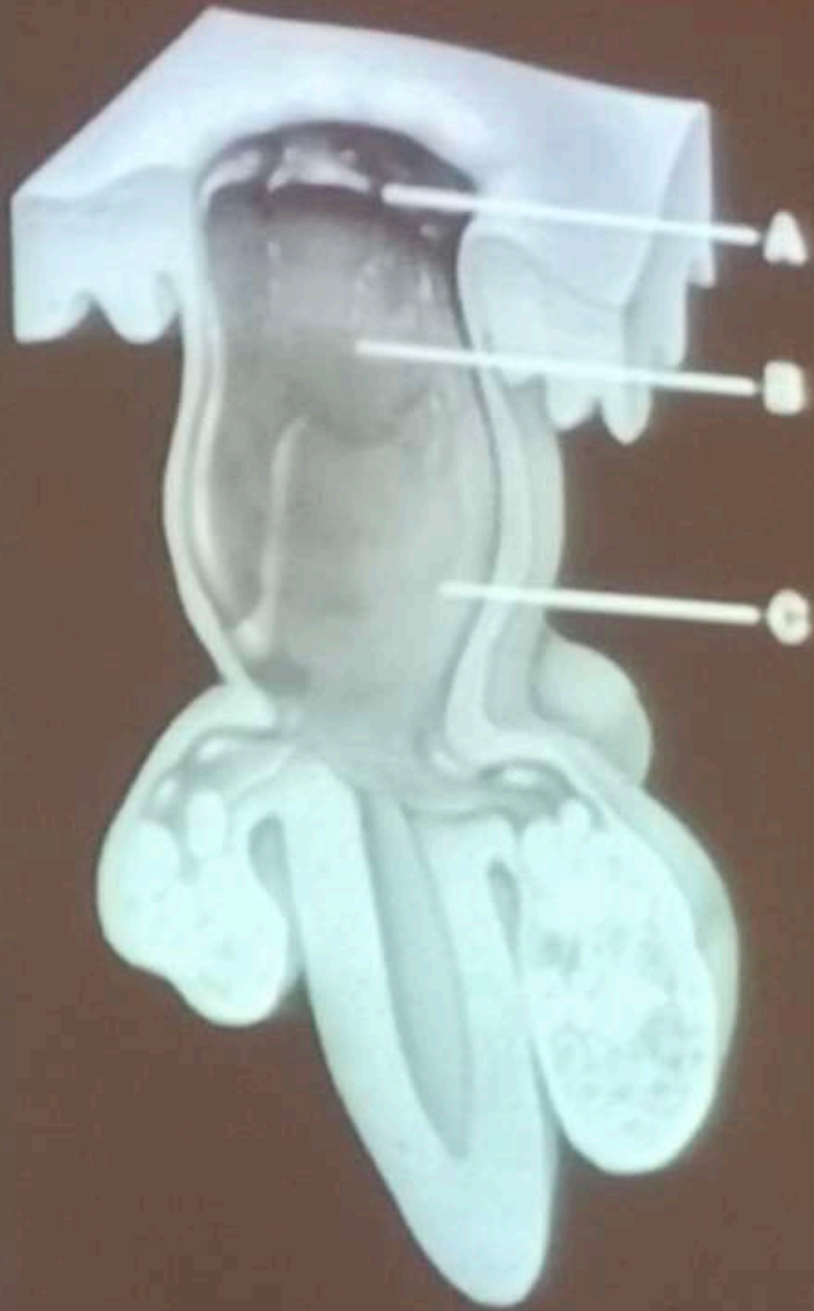


NOTICE
REGARDING THE
COMMITTEE & BOARD

Closed Comedone



Open Comedone



Clinical Signs (Comedonal Acne)

- **Open (black) Comedones**
 - Sebum & Keratin accumulate
 - Appear black papules



Closed (White) Comedones

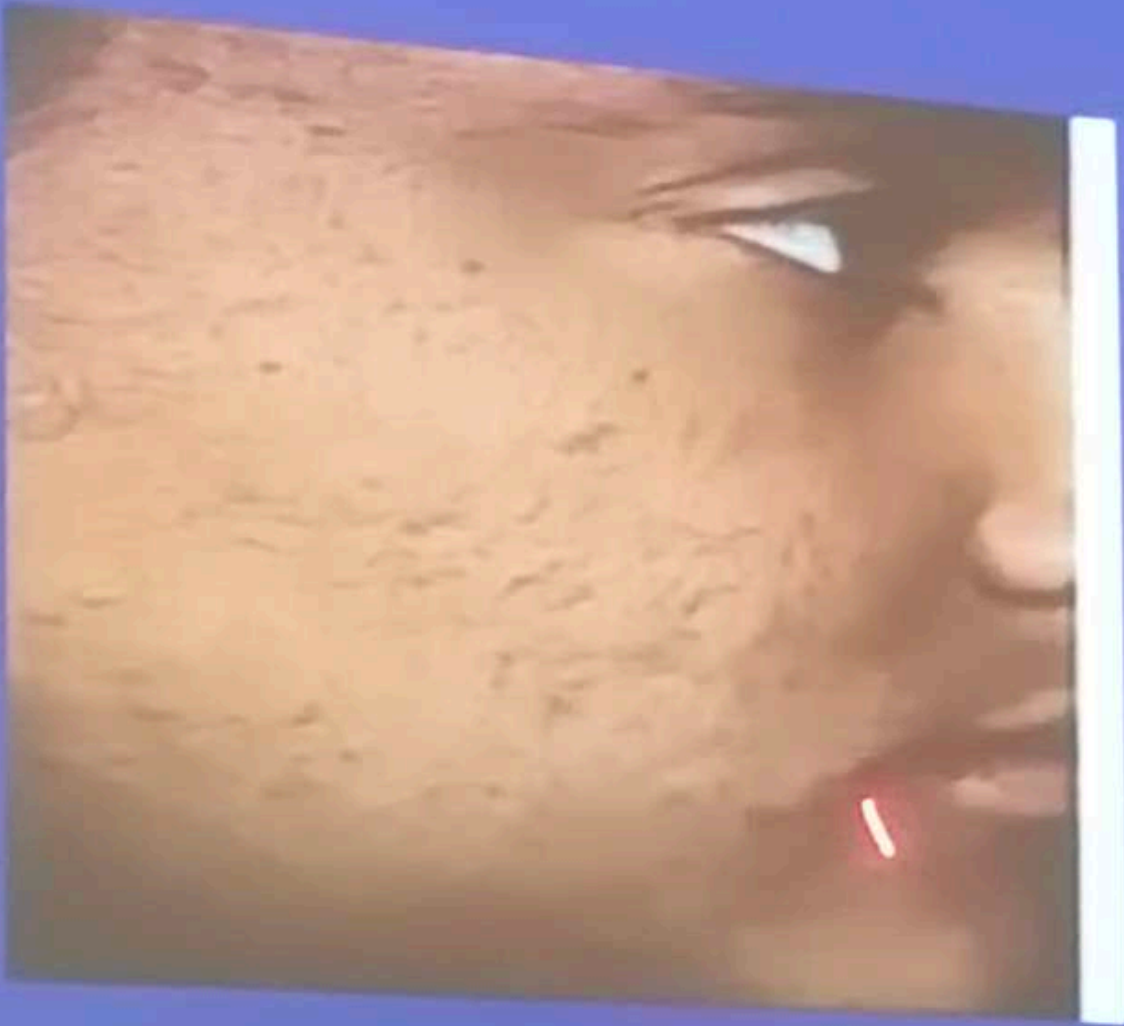
- Appear as skin-coloured papules
- Sebum & keratin accumulate
- It lies at a distance from follicular opening

Clinical Features

- Inflammatory Lesions
 - Red papules
 - Pustules
 - Nodules

- Healing Lesions
 - Pigmented macules
 - Scarring



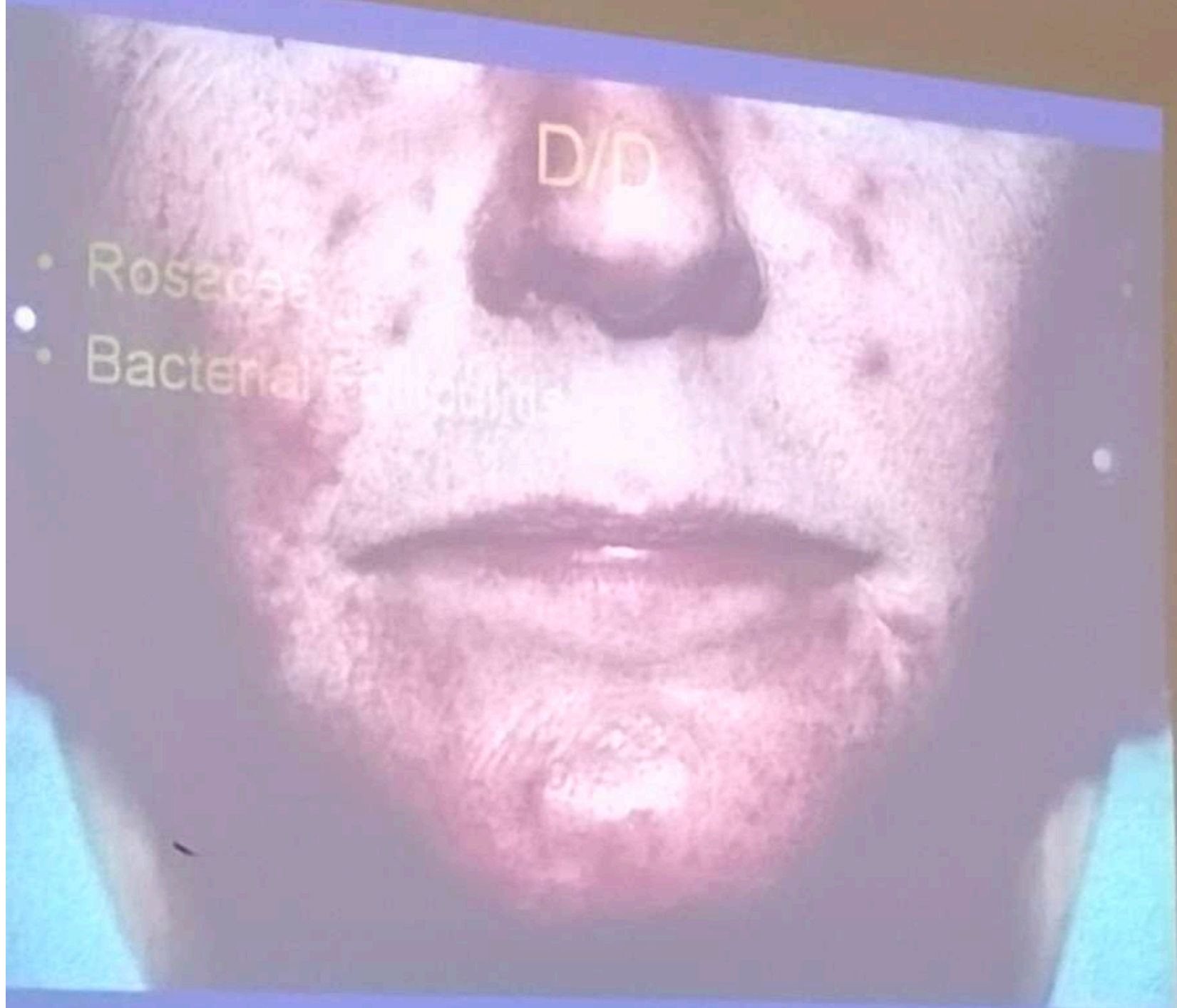


D/D

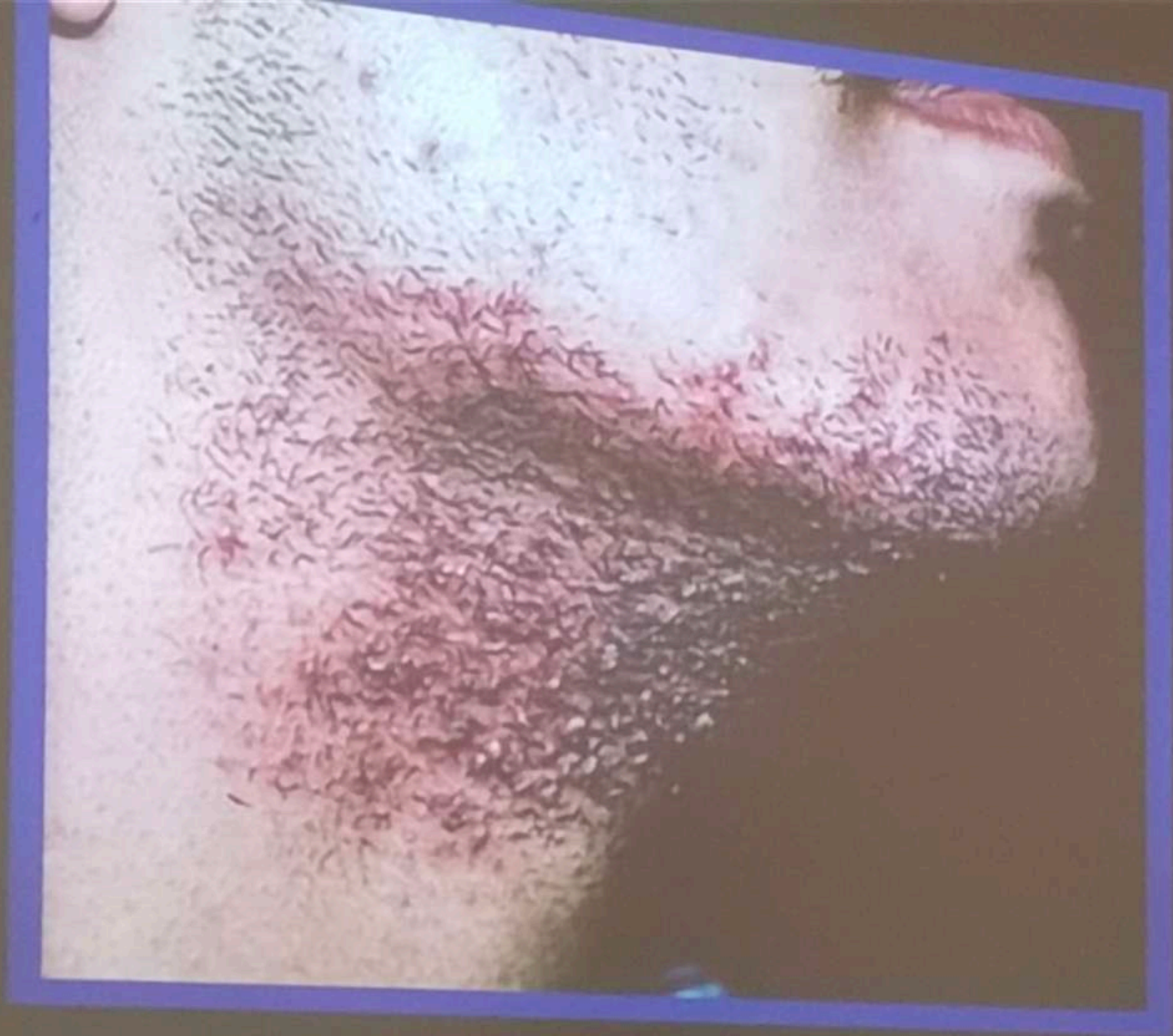
- Rosacea
- Bacterial Folliculitis

D/D

- Rosacea
- Bacterial folliculitis



NOTICE
PATIENT INFORMATION
CONFIDENTIAL & NOT FOR
REPRODUCTION



Psychological Effects of Acne

- Stress
- Embarrassment
- Anxiety
- Lack of confidence
- Impaired social contact
- Anger
- Suicidal ideation

General Measures

- Avoid oil-based cosmetics
- Avoid manipulation of lesions
- Avoid topical Steroids
- Avoid Fairness creams
- Avoid Facials, Massage

Acne Myths

- Not to worry, "You will grow out of it"
- Acne is caused by poor hygiene
- Acne is caused by something in your diet
- Vigorous washing helps
- Treatments don't work

Lab. Investigations

- Hormonal evaluation: (Serum Testosterone, DHEA-S, Pelvic US) be done in patients with dysmenorrhea & hirsutism

Retinoids

- Retinoic Acid or Tretinoin
 - Vitamin A analogue
- Mode of Action
 - Effective against comedones, as it normalises follicular keratinization
 - Anti-inflammatory

Benzoyl Peroxide

- Mode of Action
 - Antimicrobial
 - Anti-inflammatory
- Clinical Use
 - Available in 2.5%, 4%, 5% concentration
 - Initially used in lower concentration for short period(1-2 hours)
- Side Effects: irritation

Clinical Use

- Available in 0.05% concentration
- Use only at night as it can cause photosensitivity
- Apply to all acne-prone areas
- Side Effects
 - Irritation, dryness, redness, aggravation of acne.

Topical Therapy

- Retinoids
- Benzoyl Peroxide
- Antibiotics tetracycline ,
 Clindamycin
- Azelaic Acid(20%)
- Salicylic Acid