

Acne

Acne is common if not universal

- It affects 100% of males and while the intensity and duration varies, it is more intense and lasts longer with males
- Outbreaks are more severe in males
- It is especially common in the athletic age group
- It is aggravated by athletic equipment
- It is not curable but it is treatable and controllable

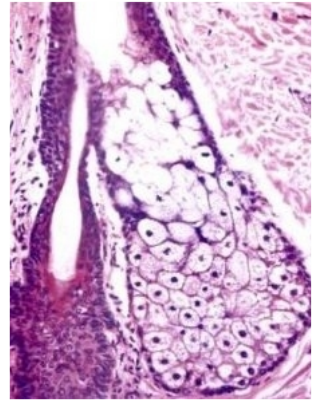


Pilo-sebaceous unit

The key to acne is the pilo-sebaceous unit.

Anatomy of pilo-sebaceous unit

- Hair shaft
- Hair follicle
- Sebaceous gland
- Erector pili muscle

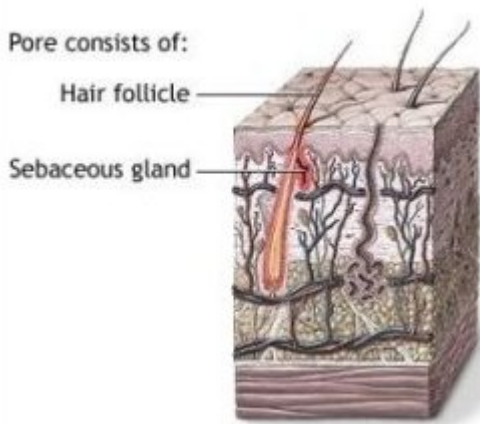


Pathological processes in acne

- Abnormal flaking of cells
- Formation of plug within follicle
- Bacteria may cause inflammation
- Enzymes may alter sebum

Role of androgens

- enlargement of sebaceous glands
- increased sebaceous oil encourages plugging



Causes

Adolescence

Male gender

Androgenic steroid use

- some oral contraceptives with strongly androgenic progesterone components
- illicit steroid use, body building etc



Rubbing or occluding skin surfaces

- shoulder pads
- helmets
- wrestling



Classification

Acne is classified according to the form and degree of involvement of the pilo-sebaceous unit, which produces the comedo, as well as by the inflammatory response. (Note that there are numerous classification scales. The current one is basically functional and straightforward)

Comedonal acne [Grade 1]

- open (blackheads)
- closed (whiteheads)



Inflammatory acne [Grades 2, 3 and 4]

- papules (less than 5mm)
- pustules
- nodules and scars



Differential diagnosis

The differential diagnosis includes:

- contact dermatitis
- folliculitis
- acne rosacea
- pseudofolliculitis barbae



Assessment

History

- did the onset occur at puberty?
- is there a pre-menstrual flare?
- does it worsen with the beginning of a new sports season?
- is there suspicion of illicit steroid use?

Exam

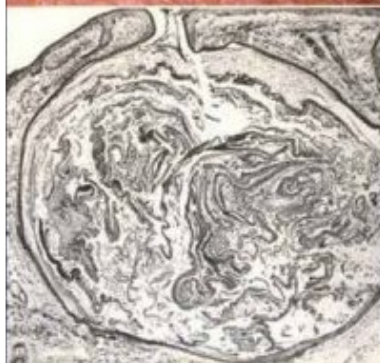
- which type or types of lesions?
- how many?
- what is the distribution?



Grade 1

comedonal

open (blackhead) or
closed (whitehead)



Grade 2

mild inflammatory



Grade 3

moderate
inflammatory



pustular acne



Grade 4

severe inflammatory

nodulo-cystic acne
with significant scarring



Treatment

Comedonal

Tretinoin (Retin-A)

- apply at bedtime after washing

Adapalene (Differin)

- apply at bedtime after washing

Azelaic acid (Azelex)

- apply twice daily

Inflammatory - Mild

Benzoyl peroxide

- apply at bedtime

Antibiotic gel

- apply twice daily

- Erythromycin gel, Clindamycin solution,

Metronidazole gel, Tetracycline solution



Inflammatory - Moderate

Oral contraceptive pills

- triphasic or 50ug to increase sex hormone-binding globulin

Oral antibiotics

- Erythromycin, Tetracycline, Doxycycline, Minocin

Inflammatory - Severe

Oral contraceptive pills

Accutane

- behavior changes, depression, suicide

- conjunctivitis, epistaxis, dry mouth, nausea

- arthralgia, bone pain

- decreased HDL, hypertriglyceridemia

- fetal malformation

- two methods of contraception and two negative pregnancy tests

[Wikipedia reference](#)

