Acne 2011

Judith Ann Mysliborski, MD

Slide 1

ACNE 2011

Judith Ann Mysliborski, M.D.

Slide 2

ACNE VULGARIS

- Up to 87% of people from ages 11 to 30
- Disease of the pilosebaceous unit
- Intensity & duration of activity vary
- Girls develop acne at a younger age than boys
- Severe disease 10 X's more likely in males (up to 15% are involved)
- Severe cystic acne patients often have a positive family history of the same

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Acne

- Unique to humans
- Many view it as a 'rite of passage'
- "Acne ruins beauty and, in some, it scars for life. Acne impacts profoundly on the quality of life, on psychosocial development, and on career prospects. It is perilous to underestimate its importance." Dr. Kubba

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Quality of Life

- The impact of acne on QoL is independent of gender or age but shows some correlation with disease activity
- Anxiety, depression, low self-esteem, low self-confidence, low self-assertiveness, embarrassment, social inhibition, affectation, shame, altered body image, psychosomatic symptoms (pain & discomfort), obsessive-compulsiveness, and suicidal ideation.

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- Those who experience a physical and psychosocial morbidity need systematic and rational therapy
- "Management of Acne: A Report from a Global Alliance to Improve Outcomes in Acne" JAAD 2003
- "Guidelines of care for acne vulgaris management" JAAD 2007

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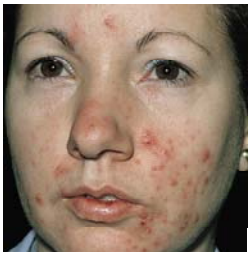

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Pathophysiology

- Abnormal follicular keratinization
- Sebaceous gland hyperactivity
- Proliferation of Propionibacterium acnes
- Inflammation & immune hypersensitivity to P acnes (antibody titers to P acnes rise in proportion to the severity of the disease)

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Poral Occlusion

- Follicular hyperkeratinization with pore obstruction
- OPEN COMEDONES (“blackhead”)
- CLOSED COMEDOMES (“whiteheads”)
- MICROCOMEDONES
- Follicular occlusion by cosmetics, oils, and tar

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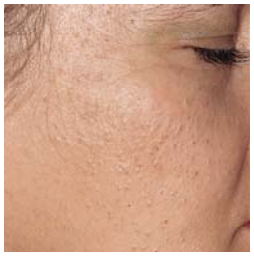

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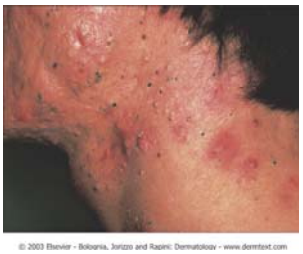

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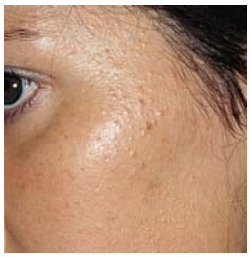

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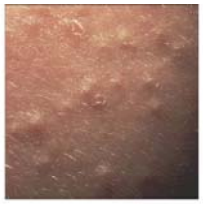

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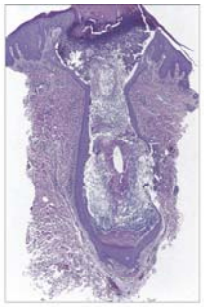

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Sebaceous Gland Hyperactivity

Androgen-dependent

Normal or elevated androgens (free testosterone & DHEAS)

Oral contraceptives containing progestogens

Seborrhea (oily skin)

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Propionibacterium acnes

- Bacterial colonization of the duct
- Sebaceous glands have holocrine secretion (shed whole)
- Sebum is a complex mixture of triglycerides, fatty acids, wax esters, squalene and cholesterol
- P. acne produces a lipase that breaks down sebum, esp. triglycerides into free fatty acids

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Dermal Inflammation

- Due to release of mediators (P. acne produces low-molecular-weight peptides which are chemoattractants for PMLs) and contents of ruptured comedone (free fatty acids, keratin)
- Clinically leads to erythematous papules, pustules, nodules and cysts

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Clinical Types of Acne

- Acne Vulgaris
- Nodulo-cystic Acne
- Acne Fulminans
- Neonatal Acne

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ACNE VULGARIS

- Acne, n. [perhaps altered from Gr. akme, point.]
- Vulgaris [L.]. Ordinary; common.
- Non-inflammatory open and closed comedones
- Inflammatory papules (<5mm) and pustules (visible central core of purulent material)
- Face 99%, back 60%, chest 15%

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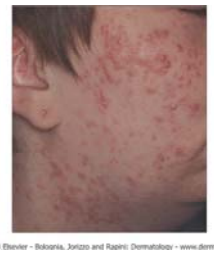

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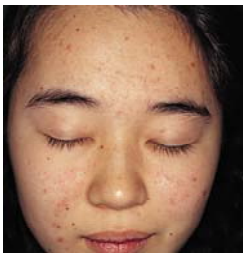

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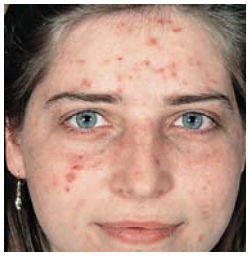

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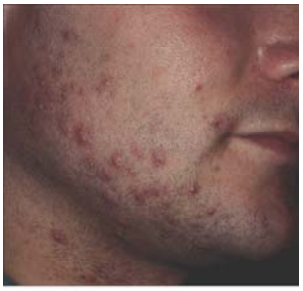

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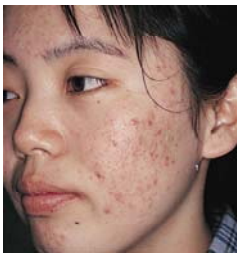

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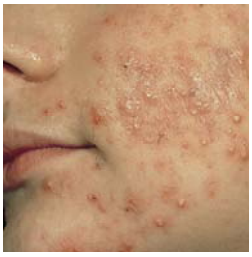

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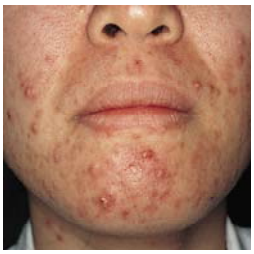

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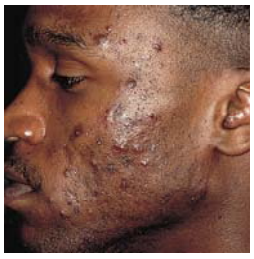

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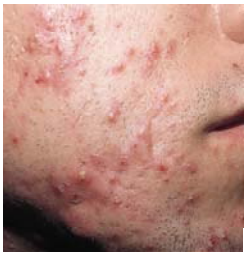

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Nodulocystic Acne

- Non-inflammatory open and closed comedones
- Inflammatory nodules (>5mm) and cysts
- Cysts may become suppurative and lesions may become hemorrhagic

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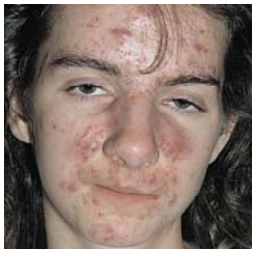

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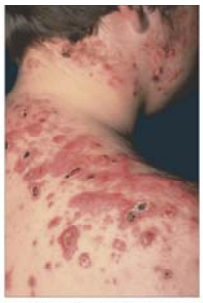

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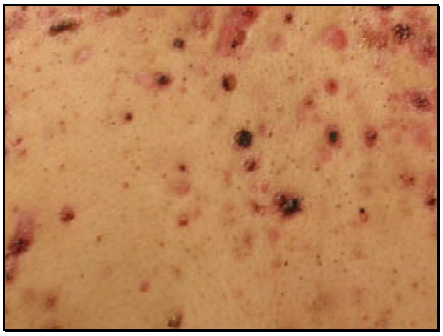

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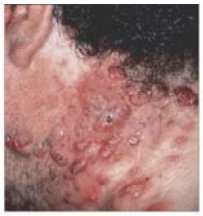

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Acne Fulminanas

- Severe and rare variant of acne
- Conglobate (gathered into balls; from the Latin globus meaning 'ball') acne: inflammatory papules, nodules and cysts as well as abscesses or cysts with intercommunicating sinuses that contain thick serosanguinous fluid or pus.
- Fever, joint pains, high ESR

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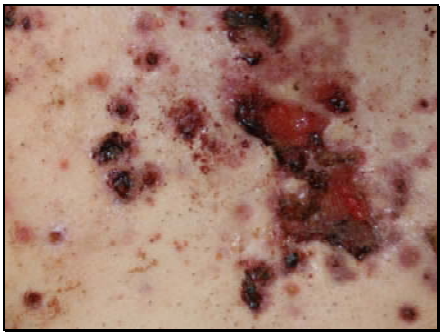

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Neonatal / Infantile Acne

- Neonatal- 'at birth' (occurs in first 2 weeks of life). 1 in 5 newborns, self-limited (resolves in 1-3 months), erythematous non-scarring papules on face & neck
- Due to transplacental stimulation of child's sebaceous glands by maternal androgens
- Infantile- during infancy (age 3-6 months), boys>girls (due to higher testosterone levels), associated with more severe teenage acne

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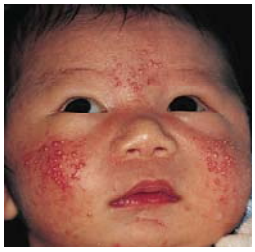

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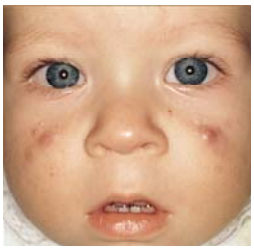

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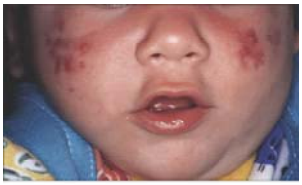

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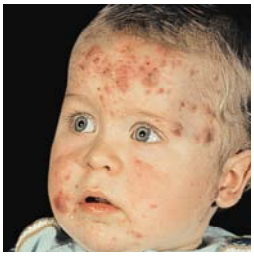

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Other variants of ACNE

- Mechanical: excessive scrubbing or the rubbing of the skin by external objects. Examples : chin from the helmet of a football player or the neck of a violin player (“fiddlers neck”)
- Tropical: sweat causes follicular occlusion by causing the perifollicular epidermis to swell. Mostly on the trunk. May be conglobate.

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- Pomade Acne: Exogenous use of tars, chlorinated hydrocarbons, oils and oily cosmetics.
- Drug-induced: Corticosteroids, androgenic and anabolic steroids, gonadotropins, oral contraceptives, lithium, iodides, bromides, antituberculosis and anticonvulsant therapy. Sudden onset with Rx. Mostly papulopustular and not comedonal.

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- Acne excoriee des jeunes filles: Obsessional picking or rubbing. Excoriated denuded discrete areas
- Acne associated with virilization: may be due to androgen-secreting tumor of the adrenals, ovaries or testes. May cause rapid onset of virilization with clitoromegaly, deepening of voice, breast atrophy, male-pattern balding & hirsutism. Also muscle hypertrophy and irregular menses.

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- Acne with virilization rarely caused by congenital adrenal hyperplasia with mild 21-hydroxylase deficiency. Patients with congenital adrenal hyperplasia may have hyperpigmentation, ambiguous genitalia, history of salt-wasting in childhood and a Jewish genetic background.

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Polycystic Ovarian Syndrome

- Consider this Dx in obese females with oligomenorrhea or secondary amenorrhea or infertility.
- Other features may be glucose intolerance, dyslipidaemia and hypertension.
- Patients have modestly raised circulating androgen levels

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Evaluation of pt. with acne and virilization

Testosterone
Sex hormone-binding globulin
Luteinizing hormone (LH)
Follicle-stimulating hormone (FSH)
Dehydroepiandrosterone sulphate (DHEAS)
Androstenedione
17-hydroxyprogesterone
Urinary free cortisol

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Evaluation Cont.

- Pending results possible ultrasound examination or computed tomography scan of ovaries and adrenals
- Females should not be on OCPs when hormone levels are measured
- Congenital adrenal hyperplasia: high levels of 17-hydroxyprogesterone
- Androgen secreting tumors: high androgen levels

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Polycystic Ovarian Syndrome Pts

Modestly elevated testosterone, androstenedione & DHEAS levels
Reduced sex hormone-binding level
LH : FSH ratio greater than 2.5 : 1
Pelvic ultrasound: multiple small ovarian cysts (although some acne patients have ovarian cysts without biochemical evidence of PCO syndrome)

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Therapy Goals

- Reduce or eliminate comedones
- Reduce or eliminate inflammatory lesions (papules, pustules, nodules & cysts)
- Prevent scarring: both physical scarring & psychological scarring

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Diet & Acne

- Dietary intake of dairy products correlated to Dx severe acne in women. (Hypothesized that milk & dairy products carry hormones and bioactive molecules that have the potential to aggravate acne)
- Acne is a disease of Western civilization. Societies that subsist on traditional (low glycemic) diets have no acne.

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- Rising prevalence of acne in developed societies may be due to high glycemic load foods (sugared foods).
- Possible explanation: hyperglycemic food intake results in an increase in insulin like growth factor 1 (IGF1) and a decrease in insulin like growth factor binding protein 3 (IGFBP3) leading to hyperandrogenism, seborrhea & follicular hyperkeratosis.

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Acne & Cosmetics

- Well-known comedogenic ingredients: isopropyl myristate, cocoa butter, lanolin, butyl stearate
- Some sunscreens are comedogenic : 'cosmacetuicals"

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Pregnancy & Acne

- Pregnancy has an unpredictable effect on acne
- Pre-existing acne may aggravate or remit during pregnancy
- Majority of patients get a beneficial effect on active acne (perhaps due to the sebosuppressive effect of estrogens).

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Topical Therapy

- Benzoyl peroxide
- Antibiotics
- Retinoids
- Salicylic acid
- Azelaic acid
- Dapsone

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Cleansing

- Gentle cleansing
- Once or twice daily
- Mild cleansers: Soaps (Dove, Purpose)
- "Soapless Soaps: (Cetaphil, Aquanil)
- "Cold Creams": (Aboline Cream)
- Medicated cleansers: benzoyl peroxide or salicylic acid washes

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Comedolytic Agents

- Topical retinoids
- Benzoyl peroxide
- Salicylic acid
- Chemical peels (10-25% trichloroacetic acid)
- Azelaic acid

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Benzoyl peroxide

- OTC 2.5%, 5% & 10% (Original Benzagel, Benzac AC)
- NeoBenz Micro 3.5%, 5.5%, 7% & 8.5%
- Triaz 3%, 6%,& 9%
- Zoderm 4.5%, 6.5%, 5.75% & 8.5%
- Benziq 2.75% & 5.25%
- Brevoxyl 4% & 8%
- Above can be gels, cleansers, washes, creams, lotions , pads, foaming cloths etc.
- Proactive

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Topical Retinoids

Tretinoin: Atralin 0.05% gel
Avita 0.025% cream & gel
Retin-A micro 0.1% gel & pump
Retin-A micro 0.04% gel

Adapalene: Differin 0.1% gel, cream, lotion
Differin 0.3% gel

Tazarotene: Tazorac 0.1% cream & gel

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Tretinoin- the Retin A Family

- Retin A 0.01% gel
- Retin A 0.025% cream & gel
- Retin A 0.04% microgel
- Retin A 0.05% cream & solution
- Retin A 0.1% cream & microgel
- Renova 0.02% cream
- Renova 0.05% cream
- Generics and competitors (ex: Renova vs Refissa)

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Topical Retinoids & Pregnancy

- Tretinoin indicated for acne: Preg C / caution in nursing
- Tretinoin indicated for facial wrinkles and hyperpigmentation: Preg C / safety in nursing unknown
- Adapalene: Preg C / caution in nursing
- Tazoratene: Preg X

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Topical Antibiotics

- Erythromycins: Erythromycin 2% gel, solution, pledgets; Akne-Mycin 2% Oint. When used alone one often get resistance. Use with BP
- Clindamycin: new pads, pledgets, foams (Cleocin T, Clindagel, Clindamax, Evoclin, and generics clindamycin phosphate)
- Azeliac acid: Azelex Cr (20%)
  Finacea Gel (15%)

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S.E. Topical Antibiotics

- Erythromycin: dryness, redness, irritation, peeling, itching, burning & urticaria. Preg B / caution with nursing.
- Clindamycin: dryness, erythema, peeling, burning. Diarrehea/colitis. Preg B/ not for use in nursing
- Dapsone: erythema, dryness. Preg C
- Azelaic acid: pruritus, burning, stinging, tingling, hypopigmentation. Preg B

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Topical Abs in combo with BP or a retinoid

- Benzamycin gel: BPO 5% & 3% erythro
- Benzaclin gel: BPO 5% & 1% clinda
- Duac gel: BPO 5% & 1% clinda
- Acanya gel: BPO 2.5% & 1.2% clinda
- Ziana gel: tretinoin 0.025% & 1.2% clinda
- Veltin gel: tretinoin 0.025% & 1.2% clinda
- Epiduo gel: BPO2.5% & 0.1% adapalene

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Azelaic Acid

- Both anti-inflammatory & comedolytic
- BID
- 20% (Azelex Cr) & 15%(Finacea Gel)
- “useful side effect”: lightens post-inflammatory hyperpigmentation

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Aczone gel

- Topical dapsone 5%
- B.I.D.
- Decrease in both inflammatory and non-inflammatory lesions
- Recent use with retinoids (Differin gel 0.1%) or a benzoyl peroxide (Bervoxyl-4 gel) 10 mins. After P.M. application

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Systemic Therapy

- Oral erythromycin
- Oral tetracycline
- Oral minocycline
- Oral doxycycline
- Oral contraceptives
- Oral spironolactone

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Oral Antibiotics : Always Issues

- Oral erythromycin: generics & the g.i. S.E.
- Oral tetracycline: generics & the food issue
- Oral minocycline: generics & the dosing issue
- Oral doxycycline : generics & the dosing issue
- Oral sulfonamides: the allergy issue

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Erythromycin

- Generics vs. EES, EryC, Ery-Tab, Erythrocin, Erythromycin base film tabs, Erythromycin ethyl succinate
- Preg B / caution with nursing
- Do not give with terfenadine
- astemizole
- pimozide
- cisapride
- MANY, many drug/drug interactions

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P.O. Erythromycin S.E.

- N / V, abdominal pain, diarrhea, pseudomembranous colitis
- Liver function abnormalities, hepatitis, pancreatitis
- QT prolongation & arrhythmias
- Hearing loss (usually reversible)

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Minocycline

- Minocycline HCl generic 50 & 100 mg.
- Dynacin tablets 50 & 75 & 100 mg.
- Minocin pellet filled capsules 50 & 100 mg.
- Solodyn extended release tablets 45 & 55 & 65 & 80 & 90 & 105 & 115 & 135 mg. Weight based Rx: 1 mg/kg/d for 12 weeks. Some new patents to expire in year 2027!!

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Minocycline S. E.

- Preg D / not for use with nursing
- Fetal harm: avoid use in pregnancy or by individuals of EITHER GENDER who are ATTEMPTING to conceive a child
- Discoloration of teeth (may be permanent): avoid use in last half of pregnancy, infancy and < 8 yrs of age
- Pseudomembranous colitis
- Drug induced hepatitis

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Minocycline S. E. Cont.

- Photosensitivity
- CNS : dizziness, pseudotumor cerebri (visual disturbances & headaches)
- Autoimmune syndromes : LE-like syndrome, autoimmune hepatitis & vasculitis
- E.M., S-J syndrome, DRESS (Drug rash w/ eosinophilia & systemic symptoms)
- Tissue hyperpirmentation

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Doxycycline

- Doxycycline generic: 50 & 100 mg
- Doxycycline calcium: Vibramycin syrup, VibraTab 100mg
- Doxycycline hycalate: Vibramycin capsule 100 mg; Doroyx delayed release tabs 75 & 100 & 150 mg
- Doxycycline monohydrate: Monodox capsules 50 & 75 % 100 mg ; Adoxa

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Doxycycline S.E.

- Preg D / not for use in nursing
- Tooth discoloration: may be permanent. Avoid use lasr half pregnancy, infants and < 8 years of age
- Clostridium difficle-associated diarrhea / pseudomembranous colitis / esophagitis
- Photosensitivity – AVOID DIRECT SUNLIGHT
- Autoimmune syndromes

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All TCN/Minocycline/Doxycycline

- Care with bismuth subsalicylate
- Care with antiacids with Al, Ca, & Mg
- Care with Fe-containing preparations

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All Oral Antibiotics

- May render oral contraceptives less effective

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Antibiotic Resistance

- Definition: a change in susceptibility of a microorganism to an antibiotic such that a higher concentration of the drug is required to inhibit growth of a resistant strain compared to fully susceptible wild type strain.
- Microbiological resistance does not always equate with clinical resistance.

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Suspect antibiotic resistance

- When there is no clinical improvement in the context of good compliance
- When early response is followed by a relapse in the face of continued treatment
- When the patient has been treated with multiple courses of antibiotics without much clinical improvement
- If the patient exhibits poor compliance

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Who (which microorganism) is resistant ????

- P. acnes: (April 2011 A. Derm.) Long term use of antibiotics to treat acne is NOT associated with drug resistance
- Staph aureus: Fewer than 10% of isolates of S. aureus showed resistance to the most common antibiotic used in acne (tetracycline). Long term use decreased the prevalence of S. aureus colonization by 70%.

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Global Alliance for Acne Recc.

- Antibiotics should not be prescribed unless necessary
- Treatment courses should be kept short
- BPO should be combined with antibiotics or used between antibiotic courses
- Simultaneous use of dissimilar oral and topical antibiotics should be avoided
- Good compliance should be emphasized

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ISOTRETINOIN

- 13-CIS-RETINOIC ACID : Derivative of retinol (vitamin A)
- Most potent antiacne agent available
- Single most important advance in acne therapeutics
- Potent sebosuppressive agent (reduces sebum production by 90%+

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- Mechanism of action: antiandrogenic through competitive inhibition of 3-alpha-hydroxysteroid oxidation by retinol dehydrogenase resulting in reduced formation of dihydrotestosterone & androstenedione

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- Normalizes ductal hypercornification & generally thins the epidermis which produces increased light reflectance – "retinoid glow"- patients often cherish
- Most comedolytic of all acne agents
- Indirectly lowers P. acnes counts
- Anti-inflammatory effect

Slide 83

Isotretinoin

- Accutane
- Amnesteem
- Claravis
- Sotret
- "severe recalcitrant nodular acne", resistant to standard treatments, including oral antibiotics
- Nodules & cysts cause pain, permanent scarring & neg. psychological effects

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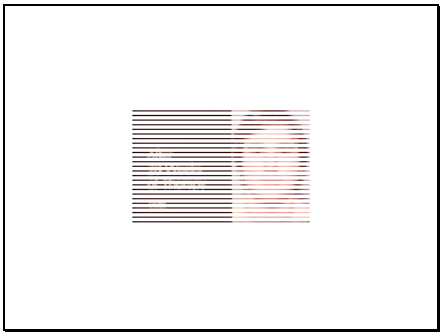

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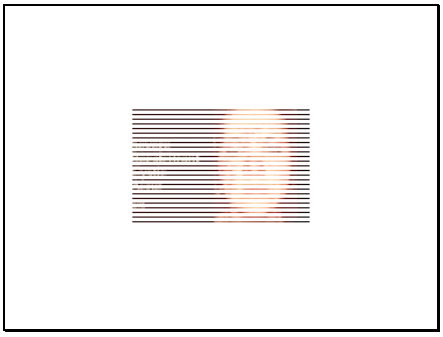

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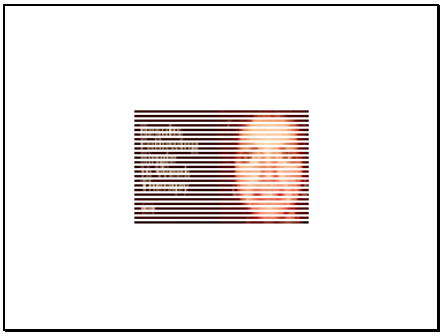

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HEADLINE February 2010

- JURY ORDERS ROCHE TO PAY $25.16 MILLION TO ACCUTANE PATIENT
- This case was awarded to a 38 y.o. who was prescribed Accutane in the mid-1990's when he was in his early 20's. Shortly after discontinuing his use of Accutane he developed chronic ulcerative colitis which led to the removal of his colon a year later.

Slide 89

Other REAL isotretinoin S.E.

- Teratogenicity
- Depression and potential for suicide

Slide 90

Isotretinoin

- Accutane- off the market (Roche)
- Amnesteem (Mylan)
- Claravis (Ranbaxy)
- Sotret (Barr)
- Non-generic was about $600 per month av. pt. Generics about $500 per month av. pt.

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iPLEDGE

- Risk management program
- Prescribers
- Patients
- Pharmacies
- Drug wholesalers
- Manufacturers
- All must register with iPLEDGE program

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iPLEDGE

- Patient & provider must register
- Need to use pts. ID & DOB with Rx
- Pt. (female-child bearing ages) needs monthly pregnancy test & use TWO reliable methods of birth control
- Male pts. & females of non-childbearing ages need to register also
- Prescriptions have window dates to be presented to the pharmacy (7d)

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COSTLY Rx

- -1mo: OV, CBC, LF, Chol & TG, Preg T
- -7d: Preg T
- Point zero: start medicaction (7 d to fill Rx)
- End 1st mo: OV, CBC, LF, Chol & TG, Preg T (7 d to fill Rx)
- End 2nd mo: OV, CBC, LF, Chol & TG, Preg. T (7d to fill Rx)

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- End of 3rd mo: OV, CBC, LF, Chol & TG, Preg T (7 d to fill Rx)
- End of 4th mo: OV, CBC, LF, Chol & TG, Preg T (7 d to fill Rx)
- End of 5th mo: OV
- + 30 d: Preg T

Slide 95

Why all those OV?

- Pregnancy Prevention education and reeducation and compliance : Re: TERATOGENICITY
- Side Effect evaluation; mucocutaneous : cheilitis, dry nose & epistaxis, dry eyes; decreased night vision; photosensitivity; IBS (rare); muscle aches (rhabdomyolisis); headaches; hair loss
- Assess for depression & suicidal ideation
- Medication compliance: amt, BID, after meals

Slide 96

Oral Contraceptives

- Ethinyl estradiol with drospirenone or norgestimate are optimal for acne
- Ethinyl estradiol & drospirenone (Yasmin, Yaz)
- Ethinyl estradiol & norgestimate (Ortho Tri-Cyclen)

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OCP

- OrthoTri-Cyclen
- Estrostep
- Yaz
- Above three OCP's approved for treating acne

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Oral Spironolactone

- Especially if female patients with a clear premenstrual trigger
- Anti-androgen
- Aldactone 50mg to 100mg daily with or without OCP
- Common S.E.: breast tenderness, menstrual spotting, hyperkalemia
- A know teratogen

Slide 99

"LIGHTS & LASERS"

- Blue Light
- Red Light
- Blue/Red Light combination
- Laser
- Radiofrequency
- Intense Pulsed Light
- PDT & ALA-PDT

Slide 100

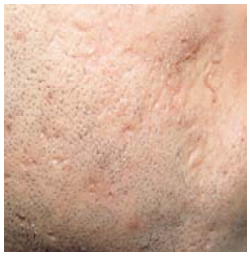
- Sebaceous Gland Targeted Lasers
  - 1320 nm laser (CoolTouch)
  - 1450 nm laser (Smoothbeam)
  - 1540 nm (Aramis)
- Bacterial Targets
  - 415 nm blue light
  - 585 nm to 595 nm PDL :pulsed dye yellow laser

Slide 101

Acne Scarring

- Depressed due to tissue destruction : may be ice-pick like, especially on face ; boxcar like; rolling; perifollicular elastolysis
- Raised and thickened : hypertrophic vs keloidal, especially on torso- chest and back and upper shoulders

Slide 102



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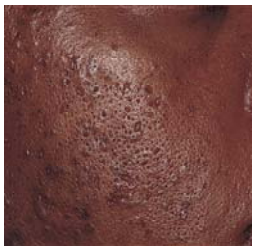

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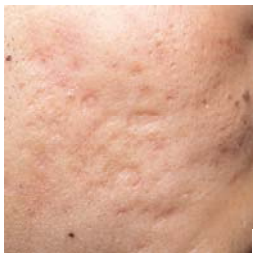

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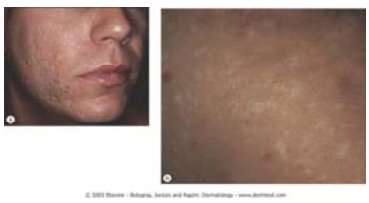

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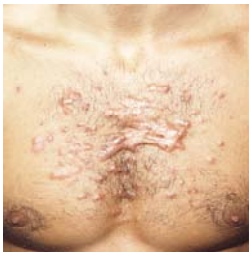

Slide 107

Pigmentary changes

- Postinflammatory erythema- redness that tends to fade with time
- Postinflammatory hyperpigmentation- especially in dark complexioned individuals. Light to dark tan brown macules. May take months to years to fade. In some patients can be permanent.

Slide 108

Rosacea

- Common, chronic facial dermatoses with intermittent periods of exacerbation & remission
- Genetic predisposition (esp. Celtic origin)
- Generally over the age of 30 (but can occur in children)
- Characterized by redness, telangiectasia, flushing, blushing and papules & pustules
- No comedones

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Intinsic & Extrinsic Exacerbating Factors

- MANY
- Ingestion of hot foods & drinks
- Ingestion of alcohol
- Spicy foods
- Heat
- Sun exposure
- Exercise
- Emotional stress
- Above stimuli cause brisk & prolonged flushing

Slide 110

Rosacea subtypes

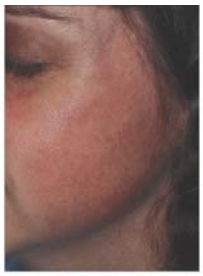
- Erythrotelangiectatic
- Papulopustular
- Phymatous
- Ocular

Slide 111

Erythrotelangiectatic Rosacea

- Intermittent to persistent flushing of the central face
- Rx: avoid triggers
  - conceal erythema : makeup (green tint hides red best)
  - laser & light therapy
  - modify flushing (NSAID, b-blockers, HRT, biofeedback)

Slide 112



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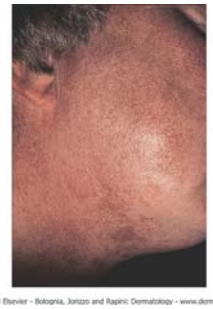

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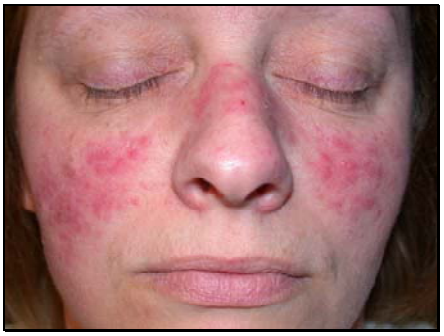
Papulopustular Rosacea

- Inflammatory papules & pustules
- Burning & stinging
- Rx: mild: topical therapies (metronidazole, azelaic acid, sodium sulfacetaimide)
  moderate: systemic antibiotics used first (TCN, doxycycline, minocycline, macrolides, sulfonamides) followed by topical agents

Slide 116

Slide 117



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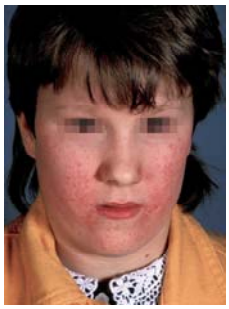

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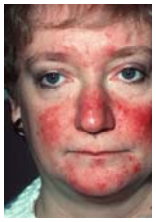

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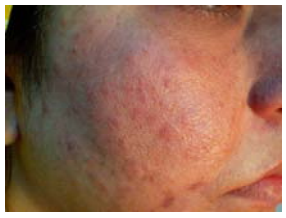

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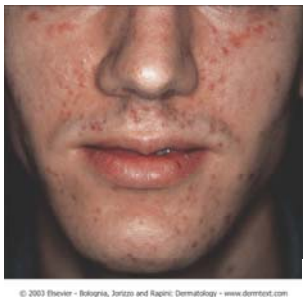

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Metronidazole

- 1% cream (Noritate) QD
- 0.75% gel (MetroGel) BID
  lotion (MetroLotion) BID
  cream (MetroCream) BID
- generic

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Oracea

- 40 mg of doxycycline in a capsule
  30 mg immediate release
  10 mg delayed release
- Not in pregnancy: Category D :
  teratogenic effects
- May cause permanent discoloration of teeth (yellow-gray-brown). Do not use in pregnancy or in infants or in children up to 8 years of age
- Other: photosensitivity, CNS, GI, hyperpigmentation, autoimmune (drug induced LE)

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Oracea

- S.E. as with other doxycyclines but advises one to MONITOR LFTs, ANA & CBC

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Perioral Dermatitis

- Variant of rosacea?
- Young females
- Clinical: erythema & scaling (irritant
  eczematous seborrheic
  dermatitis-like look)
  tiny 1-2 mm inflammatory papules
  perioral distribution
- Symptoms: pruritic & burning/raw/sore syx

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Rx Perioral Dermatitis

- Topical: BID g Metrocream 1%, g Sulfacet-R Lotion, clindamycin, erythromycin 2% solution or gel, pimecrolimus cream 1% (Elidel), or tacrolimus 0.03% or 0.1% ointment (Protopic)
  4-6 wk courseRx
- Oral antibiotics: 2-4 wk course
  TCN 500mg BID
  erythromycin 500 mg BID
  doxycycline 100mg BID
  minocycline 100mg BID

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Ocular Rosacea

- Mild conjunctivitis with soreness, grittiness & lacrimation
- Conjunctival hyperemia, telangiectasia of the lid, blepharitis, chalazion, superficial punctate keratopathy, & corneal vascularization and thinning
- Rx : P.O. TCN or doxycycline
  topical care per Ophthalmologist

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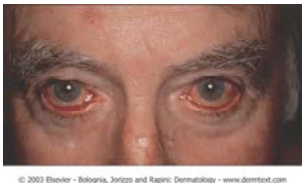

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Phymatous Rosacea

- Skin thickening , irregular surface nodularities of the nose (rhinophyma),chin & cheeks
- Due to chronic inflammation
- Tends to be permanent
- More common in men, esp. rhinophyma
- Rx: Surgical : ‘cold steel”, laser, electrosurgery, cryosurgery etc.

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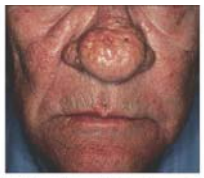

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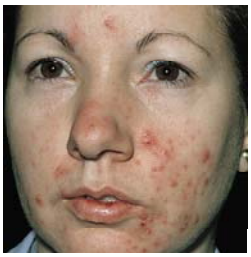

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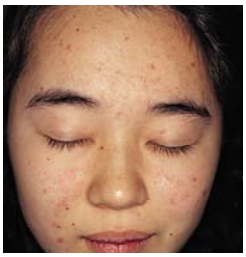

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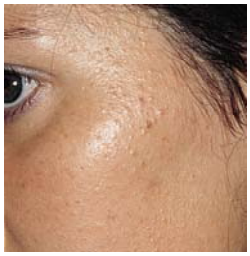

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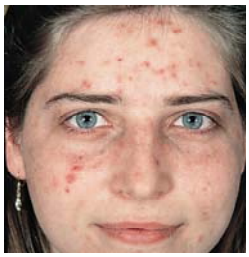

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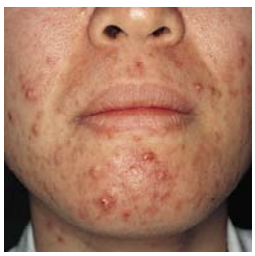

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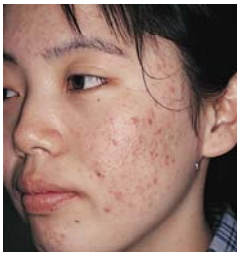

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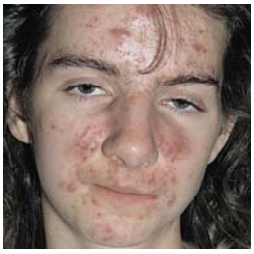

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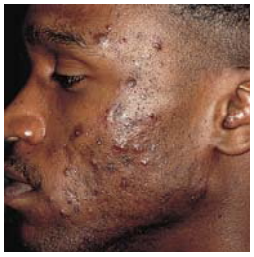

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Hidradenitis Suppurativa

- Chronic suppurative disease of the apocrine glands
- Distribution: axillae, anogenital areas, under the breast
- More common in females & pts who are obese
- Deep, painful “boils” (abscesses) which suppurate, develop sinus tracts & cord-like band of scar tissue
- Hallmark is the double comedone (blackhead with 2 or more surface openings)

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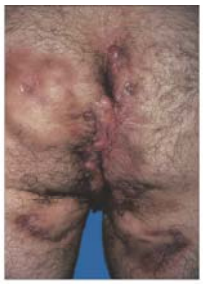

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Rx Hidradenitis Suppurativa

- I & D large fluctuant cysts
- IL steroids smaller cysts
- Weight loss (decrease Fx & sweating)
- Antibiotics- Acute course of Abs vs. lower maintenance dose of Abs
- Surgical intervention

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No Elaboration Needed

- RSRVS, CMS, OSHA, CLIA, HIPPA, HMO, PPO, PRO, ICD, CPT, P4P, iPLEDGE, etc., etc., etc.

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Table 39.1 Subtypes and variants of rosacea and their characteristics. Adapted from Wilkin et al. Standard classification of rosacea: Report of the National Rosacea Society Expert Committee on the Classification and Staging of Rosacea. J Am Acad Dermatol 2002;46:584–7.

SUBTYPES AND VARIANTS OF ROSACEA AND THEIR CHARACTERISTICS	
Disease	**Characteristics**
Subtype	
Vascular rosacea	Flushing and persistent central facial erythema with or without telangiectasia
Papulopustular rosacea	Persistent central facial erythema with transient, central facial papules or pustules or both
Sebaceous hyperplasia	Thickening skin, irregular surface nodularities and enlargement. May occur on the nose, chin, forehead, cheeks, or ears
Ocular rosacea	Foreign body sensation in the eye, burning or stinging, dryness, itching, ocular photosensitivity, blurred vision, telangiectasia of the sclera or other parts of the eye, or periorbital edema
Variant	
Granulomatous rosacea	Firm; brown, yellow, or red cutaneous papules; or nodules of uniform size

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Table 39.2 Primary and secondary features of rosacea. The diagnosis is based on one or more primary features. Adapted from Wilkin et al. Standard classification of rosacea: Report of the National Rosacea Society Expert Committee on the Classification and Staging of Rosacea. J Am Acad Dermatol. 2002;46:584–7

PRIMARY AND SECONDARY FEATURES OF ROSACEA
Primary features
• Flushing (transient erythema) • Non-transient erythema • Papules and pustules • Telangiectasia
Secondary features
• Burning or stinging, especially malar skin • Plaques • Dry appearance, especially central facial skin • Edema, soft or solid facial edema • Ocular manifestations • Peripheral location • Phymatous changes
Diagnosis based on one or more primary features.

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Table 39.3 Rosacea therapy.

ROSACEA THERAPY	
Treatment	**Dosage**
Topical	
Metronidazole	0.75 and 1% gel, cream, or lotion applied once or twice daily
Azelaic acid	20% cream, applied twice daily
Sulfacetamide sodium	Cream, suspension, wash, or lotion, applied once or twice daily
Tretinoin	0.025–0.1% cream or gel applied daily
Oral	
Tetracycline	250–500 mg once to 4 times daily
Doxycycline	50–100 mg once to twice daily
Minocycline	50, 75, 100 mg once or twice daily
Isotretinoin	10–40 mg daily

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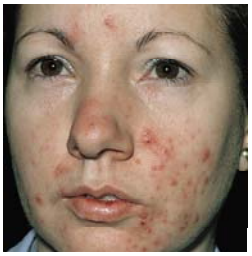

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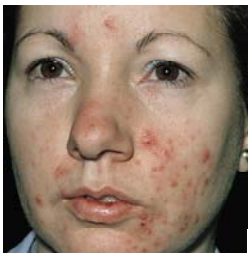

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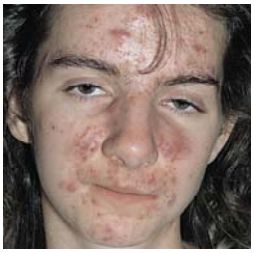

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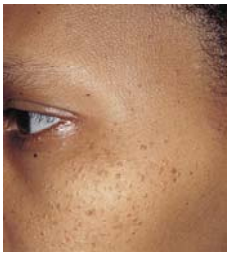

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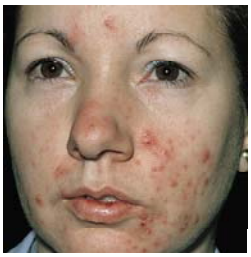

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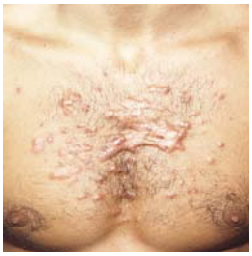

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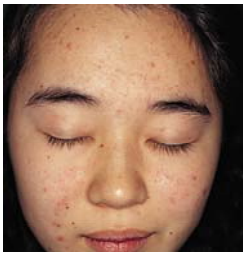

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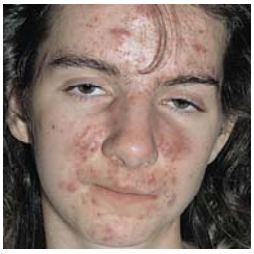

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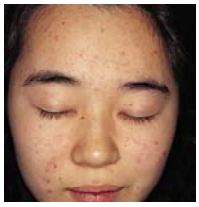

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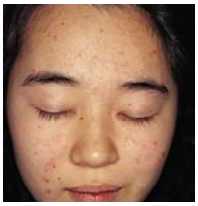

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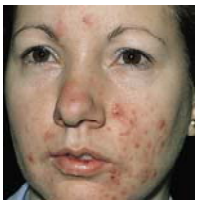

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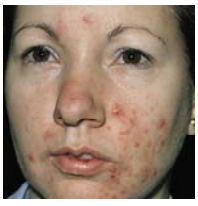

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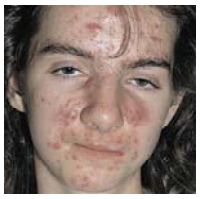

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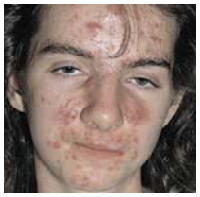

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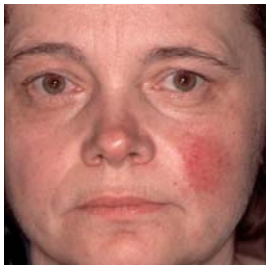

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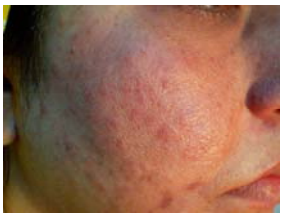

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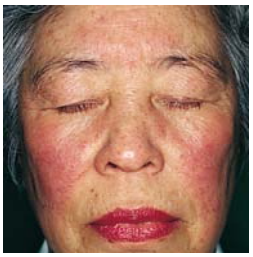

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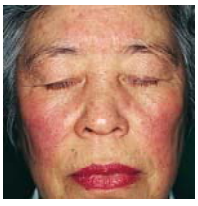

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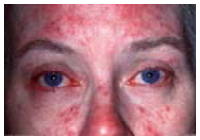

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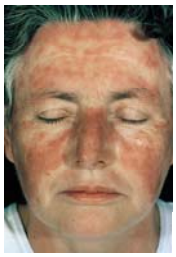

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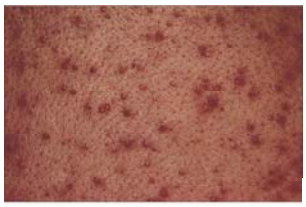

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Table 38.3 Common therapies for acne vulgaris. 1, Double-blind study; 2, clinical series; 3, anecdotal.

COMMON THERAPIES FOR ACNE VULGARIS	
Topical therapy	Systemic therapy
Benzoyl peroxide (1) Antibiotics (1) Retinoids (1) Salicyclic acid (2) Azelaic acid (2)	Oral contraceptives (1) Oral spironolactone (1) Oral minocycline (1) Oral erythromycin Tetracycline Doxycycline

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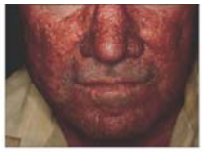

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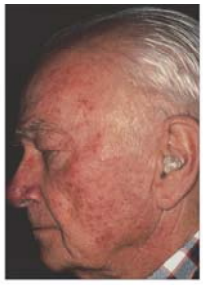

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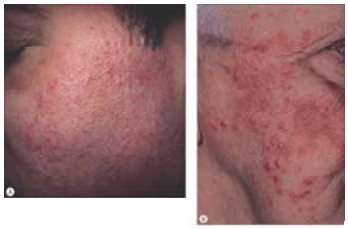

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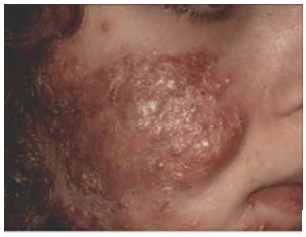

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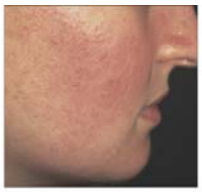

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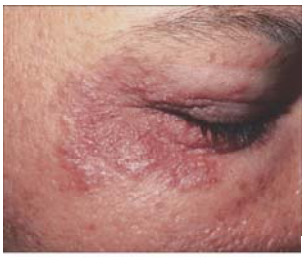

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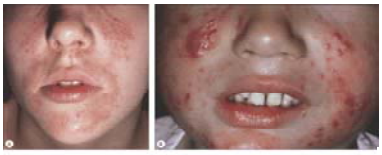

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Table 38.4 Topical retinoid preparations used for acne vulgaris.
Preparations that are currently available.

TOPICAL RETINOID PREPARATIONS USED FOR ACNE VULGARIS		
Drug	**Vehicle**	**Concentration (%)**
Tretinoin	Cream Gel Solution Gel with microsponge system	0.025, 0.05, 0.1 0.01, 0.025 0.05 0.05
Adapalene	Cream Gel Solution	0.1 0.1 0.1
Tazarotene	Gel Cream	0.05, 0.1 0.05, 0.1

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