Acne Basics

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Acne Treatment

Treatment for control, not cure

Pathogenesis
- Sebum production
  - Hormonal therapy
  - Spironolactone
  - Isotretinoin
- Abnormal follicular differentiation
  - Retinoids (topical and isotretinoin)
- Propionibacterium Acnes
  - Oral and Topical Antibiotics
  - Isotretinoin
- Inflammation
  - Oral antibiotics
  - Steroids
  - Isotretinoin

Acne Myths

“Caused by dirt”
- Excessive washing causes greater irritation

“Caused by chocolate, french fries, etc”
- No proof, however, low carb diets, including low sugar diet, may help
- Excessive milk drinkers with more acne due to estrogens in milk
**General Approach to Acne Therapy**

- Wash face twice daily with a mild soap or non-drying cleanser
- Use caution with toners/astringents/medicated cleansers or soap
- Use only non-comedogenic products
- Avoid skin contact with hair spray, gel or mousse
- Use face moisturizer with sunblock SPF 30 or higher

**Acne**

- Pick a treatment regimen that will fit in with the patient’s lifestyle
- Gels for oilier skin
- Creams for drier skin
- Start with less irritating topical medications to ensure future compliance
- May take about 6-8 wks to assess effectiveness of treatment

**ACNE THERAPY: A step-wise approach**

- Benzoyl Peroxide
- Oral Antibiotics and Tretinoin
- Topical Antibiotics + Tretinoin
- 13-cis RA
- Hormonal Therapy
Retinoids

- Normalizes the pattern of keratinization
- Comedolytic action reduces follicular plugging
- May make acne worse initially
- Initiate a pea size dab of medication for full face 20 mins after washing face
- Initiate as an QOD and then QD for better compliance

Retinoid Therapy

- Thinning of stratum corneum layer aggravates sunburn effect, greater irritation from wind, cold, or dryness
- Better results when combined with benzoyl peroxide and / or topical antibiotics
- Advise to use face moisturizer with sunblock spf 30 or higher

Retinoids

- Tretinoin 0.025% gel, crm $
- Tretinoin 0.05, 0.1% crm $
- Tretinoin 0.01 or 0.025% gel $
- Tretinoin gel microsphere 0.04, 0.1% (Retin A Micro)- NF $$$
- Adapalene 0.1, 0.3% (Differin) gel $$$
  - May be less irritating than tretinoins
- Tazorotene 0.1% gel, crm $$$$$
  - Greater effect, but more irritating
Acne Lesions

- Non-inflammatory
  - comedones: open and closed
- Inflammatory
  - Papules (< 5mm)
  - Pustules
  - Nodules (> 5mm)
  - Cysts

Benzoyl Peroxide

- Antibacterial: ↓ P. acnes. No resistance yet
- Water-based gels are less irritating
- Alcohol-based gels is more effective
- 2.5, 5, 10% wash, gel, soap
  - Start with lower strengths and ↑ as tolerated
- Causes dryness, scaling, peeling, cracking
- Bleaches clothes
- Degrades tretinoin molecule
- 2% incidence of allergic contact dermatitis

Drying and Peeling Agents

- Goal of continuous mild drying and peeling
  - Sulfur (Sulfacet R, Novacet)
  - Salicyclic Acid
  - Resorcinol
  - Benzoyl Peroxide
Topical Antibiotics

- Useful for mild pustular and mildly inflamed comedonal acne
- May be more effective when combined with benzoyl peroxide, especially to reduce antibiotic resistant P. acnes
- May not be necessary if patient is already on oral antibiotics
  - Erythro ± BP
  - Clinda ± BP

Oral Antibiotics

- Reduces P. acnes presence in follicles
- Some antibiotics have anti-inflammatory action
- Beware of antibiotic resistant strains of P. acnes
  - 1 out of 4 pts may have P. acnes resistant to TCN, Erythro, and or Clinda
  - Routine lab monitoring is not necessary

Oral Antibiotics

- Better results with starting at higher doses and then taper when control is achieved
- Tetracycline, Doxycycline, Minocycline
- Erythromycin
- Clindamycin
- Amoxicillin
- Trimethoprim/sulfamethoxazole
Side Effects of Oral Antibiotics

- Tetracyclines
  - Pseudotumor cerebri
  - Photosensitivity
    - doxy > tetra > minocycline
  - ↑Candidal vaginitis
  - Not for children < 8yo
  - Doxycycline
    - Esophagitis

Minocycline Side Effects

- Hepatitis and SLE
- Blue gray stain of skin, oral mucosa, nails, sclera, bone and thyroid gland
- Pseudotumor cerebri
- Greater CNS penetration
  - Dizziness (vertigo), ataxia, nausea and vomiting

Oral Antibiotic Side Effects

- Clindamycin
  - Pseudomembranous colitis
- Ampicillin or Amoxicillin
  - For gram negative acne
  - Safe in pregnancy (Ampicillin)
- Trimethoprim/ sulfamethoxazole
  - For gram neg acne
  - May cause TEN/ SJS
Acne Treatment Tips

- Treat continuously for 6-8 weeks minimum
- Apply topical all over, not in spots
- Truncal acne, use BP 10% QHS and consider systemic antibiotics
- Not uncommon to use oral antibiotics for 6-12 mos or more.

Initial Visit

- Get a good history
  - Ask of cosmetic products & treatments
  - Previous use of Rx and OTC meds and results
- Document types of lesions on face, back, chest
- Document any scarring

Hormonal Testing in Females

- Signs of Virilization
  - acne, hirsutism, androgenetic alopecia, low voice, increased muscle mass, clitoromegaly, or increased libido
  - Check total testosterone and DHEAS
- Signs of DM or Cushing’s syndrome, obesity, acanthosis nigricans, PCOS
Treatment of Mild Acne

- Primarily comedones, open and closed
  - Tretinoin 0.025% CRM or gel QHS, 45gm or
  - Adapalene 0.1, 0.3% (Differin gel) QHS, 45 gm
  - Benzoyl peroxide 5% QAM (otc)
    - Will bleach clothing
    - If too irritating, try:
      - Sulfur & Sulfacetamide (Novacet 30ml, Sulfacet R 25ml) BID.

Treatment of Moderate Acne

- Papules, pustules (inflammatory acne) or unresponsive to treatment of mild acne, ADD and treat for 3-6 mos:
  - Tetracycline 500 mg BID or
  - Doxycycline tabs 100mg BID
    - photosensitivity
    - esophagitis

Treatment of Severe Acne

- Numerous cysts, scarring, or unresponsive to moderate acne treatment
  - Minocycline 50-100 mg BID
  - Isotretinoin 1-2 mg/kg/day
Rosacea

- Erythema and edema, papules and pustules, and telangiectasias of nose and cheeks
- Telangiectasias and flushing not medically treatable
  - Cosmetic Laser treatment of telangiectasias is not a covered benefit
- Chronic, deep involvement of nose results in rhinophyma
  - Consider ENT referral for CO₂ laser ablation

Ocular Rosacea

- Up to 58% prevalence
- Refer to Ophthalmology

Common Sxs:
- Mild conjunctivitis with soreness and grittiness
- Lacrimation
- Subnormal tear production

Ocular Rosacea

- 86% conjunctival hyperemia
- 63% telangiectasia of the lid
- 47% blepharitis
- 41% superficial punctate keratopathy
- 22% chalazion
- 16% corneal vascularization and infiltrate
- 10% corneal vascularization and thinning
  
  *Am J Ophthalmol 88:618-622, 1979*
Rosacea Treatment

- Start with oral and topical antibiotics together, then taper off oral antibiotic with topical for maintenance
- Oral antibiotics
  - Tetracycline 500 mg BID x 4 weeks then taper to QD or QOD or
  - Doxycycline 50-100 mg BID x 4 weeks then taper to QD or QOD
- Topical antibiotics
  - Metronidazole 0.75% (Metrogel or Metrocream) BID 30 gm
  - Sulfur & Sodium Sulfacetamide lotion (Sulfacet R, 25 cc; Novacet, 30 cc) BID

Perioral Dermatitis

- Papules and pustules on erythematous, scaling base periorally up to nasolabial folds
- Occasionally make occur lateral canthus
- Etiology unknown
- Mistaken for acne in females and children
- May be associated with prolonged use of steroid creams

Perioral Dermatitis Treatment

- Tetracycline 500 mg BID (Children 10 yo and up or Erythromycin 333 mg TID for 4 weeks then tapered in next 2-4 weeks
- Metrogel 0.75% BID
- Short term use of HC, not any stronger
- Limit use of moisturizing creams
I have been consulted by Dr.*** for evaluation and treatment for ***. New Patient to Dermatology

Subjective (s):

CC: acne on face (.s)

HPI: 16yo with acne on face x 2 yrs. Worse around menses. Only using over the counter products without

PMH: none (.pmh)

Meds: none (.takmed)

Allergies: none (.alg)

Review of Systems:

Constitutional: Feels well otherwise

GU: Not pregnant

Objective (o):

Vital Signs (.vs)

Face: with multiple comedones, few papules and small pustules, no nodules, cysts, or scars. Neck, chest, back, all other right areas are not affected.

Assessment/Plan (a / p):

Acne

Oral informed consent obtained for treatment. Aims, options, risks and benefits all reviewed with the patient including the risks of forgoing treatment. All questions answered. Patient agrees to undergo treatment.

Follow up in 2 months.

Mentoring physician: Dr. Linda Wong

Clear Face, RN

Kaiser Permanente

Baldwin Park Medical Center

Today's date (.td)

Linda Wong, MD

Today's date