Pediatric Update

Acne

Chris Keeling
MSc MD FRCP Dermatology
Mohs Micrographic Surgery
Keystone Dermatology
23rd Ave & 111St

September 21, 2013

Chris Keeling Bio

BSc Honours
•'87-'91 University of New Brunswick
•'89-'90 University of Maine at Orono

MSc
•'91-'94 Aberdeen Scotland

PhD work
•'94-'96University of Connecticut

Medicine
•'2000 Dalhousie University

Dermatology
•'2005 University of Alberta

Fellowship – Mohs Micrographic Surgery
•2006 McGill University

Pediatric Update

Acne
Stages of Acne Therapy

Mild
- Comedonal
- Topical retinoid
- Alternative: topical retinoid or azelaic acid or salicylic acid

Moderate
- Mixed and papular/pustular
- Oral antibiotic + topical retinoid
- Alternative oral antibiotic + alternative topical retinoid ± alternative topical BPO

Severe
- Nodular
- Oral isotretinoin
- Alternative oral antibiotic + alternative topical retinoid ± alternative topical BPO

Nodular/conglobate
- Oral isotretinoin
- Alternative oral antibiotic + alternative topical retinoid ± alternative topical BPO

Maintenance Therapy
- Topical retinoid ± BPO

Alternative(s) for females
- Oral antiandrogen + topical retinoid ± topical antimicrobial

Evidence


Conflicts of Interest

- **Relationships with commercial interests:**
  - Speaking Honouraria:
    - Janssen, Amgen, Abbott, Galderma, Roche, Leo Pharma & Astellas, Stiefel.
  - No honourarium for today’s presentation
Objectives

1) What is Acne - Morphology
2) What is the Pathophysiology
3) Differential Diagnosis
4) How to Treat Acne

Comedones

Blackheads & Whiteheads

Papules and Pustules
Nodulocystic Scarring Acne

Pathogenesis of Acne

1) Alteration in the keratinization process
2) P. acnes follicular colonization
3) Release of inflammatory mediators into the skin
4) Sebum production by the sebaceous gland Under hormonal drive

Actions of Topical Anti-acne Therapies

- **Topical retinoids**
  - Normalize follicular desquamation
  - Reduce inflammatory response
- **Topical and/or Oral antibiotics**
  - Reduce inflammatory response
  - Reduce microorganisms
- **Benzoyl peroxide (BPO)**
  - Kill microorganisms
- **Estradiol (DCP) +/- cyproterone**
  - Settles sebum production
Acne

- Mimickers

Acne Scarring
Eczema Herpeticum

- Patient with a Hx of Atopic Dermatitis
- Blisters all over the face
- Steroids just not working for eczema
- The po then iv ABX not working either
- High fever
- Swab for viral culture!
- Acyclovir @ 20 – 40 mg/kg/day
- Po ABX may be necessary if impetiginized
Acne

My Approach

• Mild/Moderate acne
• Afraid of isotretinoin

• Combination Tx
  – Retinoid, BPO
  – ABX po/top
  – OCP

• Scarring
• Bad acne
• Very upset

• Oral Retinoid
  – Isotretinoin

My Approach

• Mild/Moderate acne
• Afraid of isotretinoin

• Combination Tx

Typical teenage female with optimal combination Tx

Pix:
  Tactuo gel qhs 30g - 3rpts
  Minocycline 100mg po qhs 30T - 3rpts
  +/- Diane 35 qd 30T

Follow up every 3 months
• Drop MCN
• Drop Topical gel
• Hold OCP
My Approach

- Mild/Moderate acne
- Afraid of isotretinoin
- Combination Tx

Alternative brands

- Retin A micro 0.1%, 0.04%
- Stieva / Stievanycin 0.05%, 0.025%, 0.1% cr or gel
- Differin gel
- Biacna gel
- Clindoxyl or Benzaclin gel
- Doxycyclin 100mg bid or qhs
- ERYC 333 tid <12yrs old
- Septra/Bactrim
- Any OCP

My Approach

- Scarring
- Bad acne
- Very upset
  - Moderate acne
- Isotretinoin - Accutane

- Teen
  - Pill daily for 6-9 months
  - Monthly Blood Work
  - Dry
  - sore
  - "Go on the wagon"
  - Girls MUST NOT get pregnant

- Worried Parent
  - Stop po ABX – head aches
  - Liver/chol damage – monitored and reversible
  - Depression
  - No causal effect of isotretinoin
  - Anecdotal evidence at best
  - Well known evidence that it improves mood
  - GI (Crohns & Collitis) (OR 4.37) 1-20/100,000/yr
  - Doctor (monthly)
    - CBC, ALT, GGT, Chol, Tg, BetaHCG

Accutane
Accutane

• Dose
  – 0.5-1mg/kg/day (40mg/d)
  – Complete 120-150mg/kg/course (6-12mos)

• All you need to know is:
  – For every 20lbs of pt 1 pack of 40mg tablets
  – eg. 120lb female gets 6mos of 40mg qd
  – THAT IS THE MINIMUM DOSE!

My Approach

• Mild/Moderate acne
• Afraid of isotretinoin
• Combination Tx
  – Retinoid, BPO
  – ABX po
  – OCP

• Scarring
• Bad acne
• Very upset
• Oral Retinoid
  – Isotretinoin

Questions?
My Approach

- Novel Tx’s
  - Intralesional Triamcinolone
  - Surgical

“Laser” Acne Treatment

My Approach

- Afraid of “Drug” Tx
- Pregnant
- Novel Tx’s
  - Blu U
  - Photodynamic therapy (leuvulan)
PDT - Reaction

Acne Scar Assessment

Pigmentation:
- erythema – Pulsed dye laser
- hyperpigmentation – Q-switched laser or fractionated CO2/Erbium

Sx:
- Ablative or non ablative fractionated lasers

Acne Scarring with Laser