**Rosacea**

**Background**
1. Definition
   - Acneiform disorder of middle-aged adults with erythema and telangiectasia of cheeks, nose, chin and, in time, entire face
2. Chronic and recurrent

**Pathophysiology**
1. Pathology of disease
   - Subtypes
     - Erythematotelangiectatic
       - Flushing and persistent erythema on central face commonly with telangiectasia, swelling, stinging, roughness
     - Papulopustular
       - Central erythema with papules and pustules
       - Acneiform without comedones
     - Phymatous
       - Thickening of skin with nodules
       - May include rhinophyma with thickening of cheeks, chin, forehead
     - Ocular
       - Bloodshot eyes, dryness, itchiness, conjunctivitis
   - Incidence, prevalence
     - 14% in women, 5% in men
     - Estimated 13-14 million US adults affected between 30-60 yo
   - Risk factors
     - Sun exposure, stress, hot weather, alcohol, spicy foods, hot drinks, steroids
   - Morbidity / mortality
     - Chronic condition with intermittent flares, non life-threatening

**Diagnostics**
1. History
   - Flushing of face, increased warmth, non transient redness, papules, pustules
2. Physical exam
   - Flushing, dilated blood vessels, papules, pustules in central face, esp. forehead, cheeks, nose, eyes
3. Diagnostic testing
   - Clinical diagnosis based on history/exam and negative lab findings for other diseases
   - Laboratory evaluation used not for diagnosis but to investigate other diseases on differential diagnosis

**Differential Diagnosis**
1. Discoid lupus
2. Seborrhoeic dermatitis
3. Drug-induced acne, including chloracne (Viktor Yushchenko dioxin poisoning 2004)
4. Contact dermatitis
5. Photo dermatitis
6. Flushing with carcinoid or pheochromocytoma

**Therapeutics**
1. Requires long term treatment for control of symptoms
   - Limited quality evidence with regard to best treatments
   - Some topicals may be sun sensitizing
   - Apply sunscreen as needed
   - Consider q6-8 week visit intervals until controlled
2. Topical Tx
   - Choose one initially then consider alternative if not effective
   - Metronidazole gel 1% apply once daily, 0.75% cream, lotion or get apply twice daily
   - Azelaic acid 20% cream BID
     - Gel form may be modestly more effective than metronidazole 0.75% gel in papulopustular rosacea
     - NNT 7.2 (improved erythema)
     - NNH 5.2 (facial side effects)
   - Tretinoin cream (0.025, 0.05, 0.01%)
     - Start low dose and every other night dosing and gradually increase to nightly HS use
   - Likely less effective:
     - Sodium Sulfacetamide/sulfur (10%/5%) cleanser or gel applied qD or BID
     - Clindamycin 1% solution/gel/lotion qD or BID
     - Erythromycin 2% ointment BID
     - Other:
       - Permethrin 5% cream
       - As effective as metronidazole gel (0.75%) in one quality study
3. Oral Tx
   - Oral antibiotics
     - Sometimes used for newly diagnosed patients together with topical treatments and then, when controlled gradually reduced to minimally effective dose or topicals alone
     - Esp. useful for papulopustular and ocular forms
     - Tetracycline 250 mg or 500 mg BID
     - Doxycycline 50 mg or 100 mg BID
       - Lower doses may have less side effects and less induced antibiotic resistance
     - Erythromycin 250 mg BID to QID
     - Minocycline 50 mg to 100 mg qD (extended release form)
Follow-Up
1. Return to office
   o Q 6-8 week intervals as noted above
2. Refer to specialist
   o Severe rhinophyma not responsive to topical/oral therapy - laser options
   o Severe nodulocystic rosacea may respond to oral isotretinoin

Prognosis
1. Very good for control, limited for cure

Prevention
1. None known
2. Avoid hot liquids to improve flushing and avoiding sun may help

Patient Education

References
8. Torok HM, Webster G, Dunlap FE, Egan N, Jarratt M, Stewart D. Combination sodium sulfacetamide 10% and sulfur 5% cream with sunscreens versus metronidazole 0.75% cream for rosacea. Cutis 2005 Jun;75(6):357-63.


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