Acne and The Red Face

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Objectives

• Discuss pathophysiology of acne
• Show how pathophysiology relates to effective treatment
• Overview of acne
• Case studies in acne

• Differential diagnosis of the red face
Aetiology (non-inflammatory)

- Sebaceous glands hypersensitive to normal levels of testosterone \(\rightarrow\) excess oil production
- Dead skin cells lining pores not shed properly and clog pores \(\rightarrow\) follicular hyperkeratosis
- Seborrhoea, open comedones (blackheads), closed comedones (whiteheads), cysts
Aetiology (inflammation)

- P. acnes proliferation leads to inflammation
- Papules, pustules and nodules
- Post-inflammatory hyperpigmentation
- Scars
  - Hypertrophic / keloid
  - Atrophic / Shallow vs Ice pick / Deeper
Scars
Subtypes

- Acne excoriee
- Mechanical/frictional acne
- Drug induced-steroids/anticonvulsants
- Pomade
- Cosmetic
- Industrial/chloracne
Treatment

**Oral Isotretinoin:**
- Reduces sebum
- Normalizes desquamation
- Inhibits *P. acnes* growth
- Reduces inflammatory response

**Benzoyl peroxide:**
- Kills microorganisms

**Antibiotics:**
- Reduce microorganisms
- Reduce inflammatory response

**Topical retinoids:**
- Normalize desquamation
- Reduce inflammatory response

**Hormones:**
- Reduce sebum production
Topicals

- **Retinoids** (Differin, Retin A, Isotrex)
- **BP** (Panoxyl 2.5/5/10%, Acnecide 5/10%)
- **Azelaic acid** (Skinoren)
- **Antibiotics** (Zineryt, Dalacin T)

- **Combinations** (Isotretinoin/Erythromycin = Isotrexin); (BP/Clindamycin = Duac); (Adapalene/BP2.5% = Epiduo)
Orals

- **Antibiotics**
  - tetracyclines, erythromycin, trimethoprim
- **Contraceptives**
  - Yasmin / Dianette
- **Predisolone** (pre isotretinoin rarely)
- **Dapsone**
- **Spironolactone**
- **Isotretinoin** (aim total dose 120mg/kg)
Isotretinoin

- Check fasting lipids and LFTs
- Teratogenic so PPP in place
- Dryness eg chelitis, nosebleeds
- May get slightly worse initially
- Depression/suicide risk

Effective in ~70%
Surgery

- Macrocomedones: large comedones lead to recurrent cysts/nodules and other treatments will not work
- Hyfrecation
- Cyst drainage / excision
- Intralesional steroids
NICE guidelines for referral

- Severe acne that may require oral isotretinoin (soon opa)
- Moderate acne not responding to conventional treatment (routine opa)
- Severe psychological sequelae (soon opa)
- Severe variant eg acne fulminans with systemic symptoms (urgent opa)
NICE guidelines (routine opa)

• Is at risk of, or is developing, scarring, despite primary care therapies

• Has moderate acne that has failed to respond to treatment which should generally include several courses of both topical and systemic treatment over at least 6 months. Failure is probably best assessed by the patient

• Is suspected of having an underlying endocrinological cause eg. PCOS
Counselling

• Empathise with patient to build trust (poor Tx adherence in 60%)
• Dispel myths (acne not caused by bad habits, [bad diet], bad living)
• Explain acne is a chronic disease with periods of remission & relapse
  – Provoked by stress, menstruation, anabolic steroids
• Treatment takes time to work (usually 4-6 weeks; although Duac effective after only 2 weeks)
  – Lesions may get worse before getting better
  – Skin irritation may occur: usually lessens over time; can be controlled by reducing frequency of application
• Stress the importance of compliance
  – Provide clear instructions how to take/apply medication
Skin Care Advice

- Never pick at lesions
- Excessive/vigorous washing does not help
  - Clean skin no more than twice a day
  - Use gentle cleansers and warm water applied with the hands
  - After cleansing, apply non-comedogenic moisturiser if skin is dry/irritated
- Make sure that all sunscreens, hair products, and make-up are non-comedogenic
- ??Low GI diet
The Red Face

Differential diagnosis
Rosacea subtypes

- Type 1 erythromelalgiaectatic
- Type 2 papulopustular
- Type 3 rhinophymatous
- Type 4 ocular
Rosacea differentials

- Acne
- Pyoderma faciale
- Steroid rosacea
- Perioral dermatitis
- Seborrhoeic dermatitis
- Irritant contact dermatitis
Rosacea: General measures

• Avoid oil based creams/make up
• No topical steroids
• Use light oil free sunscreen
• Avoid flushing
  – Keep face cool, reduce exposure to hot/spicy foods, alcohol, hot showers/baths, warm rooms
Rosacea: Treatment

- **Topicals**
  - Metronidazole cream/gel (Rozex, Noritate)
  - Azelaic acid (Finacea) bd
  - Protopic / Elidel

- **Orals**
  - Antibiotics: tetracyclines eg lymecycline, doxycycline, efracea, minocin
  - 2nd line: erythromycin, metronidazole
  - Isotretinoin
  - Clonidine to reduce flushing
  - Diclofenac to reduce discomfort

- **Laser eg PDL for telangiectasia**
- **Surgery: resurfacing of rhinophyma via plastic surgeon or CO2 laser**
Seb derm treatment

• Scalp
  – Shampoos at least 2xwk for at least 1 month
  – Nizoral / Selsun / H+S sensitive
  – Capasal / Polytar / Alphosyl 2 in 1 / Dermax
  – Sebco if very scaly
  – Steroid to reduce itch: BV scalp lotion / Bettamousse / Betacap / BV scalp application
  – Diprosallic / Locoid / DV scalp application and Elocon lotion are alcoholic base so may sting
Seb derm treatment

- Face, ears, chest and back
  - Soap substitute
  - Ketoconazole or ciclopirox od for 2-4 wks
  - Topical steroid eg Daktacort, 1% HC bd for 1-2 wks, Trimovate
  - Protopic / Elidel
  - Pulsed itraconazole
  - UVB
Eczema

- Atopic
- Allergic contact
- Seborrhoeic
Photodermatoses: classification

• Primary (idiopathic)
  – PLE, JSE, AP, CAD, SU, HV, Jessner’s, REM, pseudoporphyria

• Secondary (exogenous) photoallergic vs phototoxic
  – Drugs eg. quinine (can last 2yrs), thiazides, amiodarone, tetracyclines, OCP/HRT, NSAIDS…
  – Chemicals eg. plants, veg, fruit, sunscreens, fragrances, dyes (chromium in tattoos), disinfectants…
Photodermatoses: classification

• Photoaggravated
  – Dermatoses eg AD, seb derm, psoriasis, Dariers, LP, Grovers..
  – Systemic eg SLE, dermatomyositis, HSV, EM

• Metabolic
  – Porphyrias, pellagra, Hartnup, Kwashikor, Smith-Lemli-Opitz

• Genetic
  – XP, trichothiodystrophy, Cockaynes, Rothmund-Thomson, Blooms
Investigations

- FBC, U+E, LFT
- CK
- Autoantibody screen: Ro/La, ANA
- Porphyrin screen
- HLA studies
- Phototesting
- Patch tests
  - aeroallergens: compositae, fragrance;
  - sunscreen
- Photopatch tests
- Skin biopsy
Photodermatoses: General measures

• Avoid midday sun exposure
• Be aware of and avoid exacerbating factors
• Window glass protective film
  – car, house, school, conservatory
• Clothing
  – yarn, colour, weave, wear, cover, layers
• Sunscreens reflective vs uv absorbing
Thank you for your attention