Management of Eczema in the Community

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Learning Objectives

• To be able to differentiate between various clinical presentations of eczema
• To understand a systematic approach to managing eczema in the community
• To understand basic principles of eczema treatment
• When to refer?
## Types of Eczema

<table>
<thead>
<tr>
<th>Type of Eczema</th>
<th>Description</th>
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<tbody>
<tr>
<td>Atopic Eczema</td>
<td>Children, inherited factors important, FH atopy</td>
</tr>
<tr>
<td>Irritant Contact Dermatitis</td>
<td>Provoked washing, detergents, chemicals, friction</td>
</tr>
<tr>
<td>Allergic Contact Dermatitis</td>
<td>True type IV reaction to contact with substances</td>
</tr>
<tr>
<td>Discoid Eczema</td>
<td>Annular lesions stubborn to treat</td>
</tr>
<tr>
<td>Seborrhoeic Dermatitis</td>
<td>Irritation possibly to Malassezia yeasts</td>
</tr>
<tr>
<td>Stasis Eczema</td>
<td>Secondary to oedema and poor venous drainage</td>
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*Respect our patients and colleagues | Encourage innovation in all that we do | Provide the highest quality care | Work together for the achievement of outstanding results | Take pride in our success*
Atopic Eczema

• Affects 15-20% school-age children but 2-10% adults

• 80% mild disease, 2-4% severe

• Unusual before age 4 months, onset usually before 2 yrs age
  – Teething

• ‘Terrible two’s’ often severe between ages 1-4 yrs

• 60% children clear by teens
What does atopic eczema look like?

- **Infantile Atopic Dermatitis**
  - Widely distributed
  - Cheeks
  - Napkin can be spared or involved

- **Pre-school Atopic Dermatitis**
  - More localised and thickened
  - Extensor surfaces
  - Genitals

- **School Age Atopic Dermatitis**
  - Flexural pattern
  - Pompholyx
  - Discoid

- **Adults**
  - Diffuse dry and lichenified
  - Localised: hands, eyelids, nipples, flexures
  - Recurrent infections
  - Irritant element
Inherited Barrier Defect

- Abnormal filaggrin expression
- Filament associated proteins bind to keratin fibres in epidermal cells
- Loss of filaggrin causes:
  - Corneocyte deformation
  - Reduction natural moisturising factors
  - Increase in skin pH
Management

- Education
- Cleansing
- Emollients
- (Antihistamines)
- Topical Steroids
- Calcineurin inhibitors
Education

• Information sheets
• Personalised treatment plans
  • Make it fun, keep diary etc
• Nursing involvement
  • Provide care plans
• Avoid irritants and exacerbating factors
  • Soap/shampoos
  • Clothes and bedding
  • Detergents/fabric softeners
  • House dust mite avoidance /animal dander
  • ?food allergies
  • Scratching (consider occlusion) –’habit reversal’
  – Secondary infection:
    • Staphylococcal
    • Eczema herpeticum

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CARE PLAN FOR Eczema

THE 3 STEPS FOR ECZEMA SKIN CARE

STEP 1 - MAINTAIN

- Use a non-greasy moisturiser when skin is under control.
- Use____________________ cream____________________ times daily.

Nongreasy creams usually contain glycerine and mineral oils, such as most brands of Sorbelene, QV, Dermomodrate (Dermasoft), Hamilton Lotion, Dermaveen Moisture Lotion, Hydarea, Alpha-keri lotion and Neutrogena moisturisers. Avoid parabens as some people may be sensitive to these.

Suggestion: To help you remember, moisturise at least twice per day, when you clean your teeth.

If skin feels dry or if you need to apply STEP 1 type moisturiser more than 4 times daily, go to STEP 2

STEP 2 - PROTECT & REPAIR

- Use thick creams containing white and/or soft paraffin.
- Use__________________cream__________________times daily or whenever skin feels dry.

Thicker creams include QV Cream (Ego), Dermaveen eczema cream, Cetaphil (unless nut allergy diagnosed) and E45 Boots.

Suggestion: You can use step 2 creams during the day and a greasy cream from step 3 at night after a few minutes of bathing.

If skin feels very dry or if any areas look like they might flare, go to STEP 3

STEP 3 - INTENSIVE TREATMENT

- Use greasy creams containing white and soft paraffin.
- Use__________________cream__________________times daily.

Greasy creams include Dermene (Aspen) and QV Intensive (Ego).

If your doctor has prescribed topical corticosteroid ointments for when your eczema flares to reduce inflammation, use in the amount suggested by your doctor (refer to Action Plan).

<table>
<thead>
<tr>
<th>Area</th>
<th>(g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FACE</td>
<td>1.5</td>
</tr>
<tr>
<td>BODY</td>
<td>2</td>
</tr>
</tbody>
</table>

ACTION PLAN FOR Eczema

ECZEMA UNDER CONTROL

- Skin is soft and supple (not red or itchy)

ACTION: STEP 1 - MAINTAIN

- Moisturise whole of skin area at least 2 times daily with non-greasy cream.
- Remove triggers and do not over heat.
- Watch for signs of skin becoming red, frequently itchy and dry.
- Moisturiser: ____________________________
- Non-soap based wash product: ____________________________

ECZEMA FLARE (MODERATE)

- Skin is itchy, some redness, dryness, flaking

ACTION: STEP 2 - PROTECT & REPAIR

- Apply thick cream to all of skin (contains paraffin or equivalent) during day.
- Apply greasy cream at night.
- Apply wet wraps at night to protect skin.
- Watch for red flares - use prescribed topical corticosteroid ointment on red areas.
- May need to use bath oil containing antibacterial preparation.
- Watch for signs of infection (weeping, oozing, crustling, pusules, unresponsive eczema, fever or malaise) - may need antibiotic prescribed by doctor.
- Moisturiser: day ____________________________ night ____________________________
- Corticosteroid ointment: face ____________________________ body ____________________________
- Antibiotic: ____________________________
- Other prescribed medication: ____________________________
- Bath oil or body wash: ____________________________

ECZEMA FLARE (MODERATE TO SEVERE)

- When eczema is not responding to above treatments

ACTION: STEP 3 - INTENSIVE TREATMENT

- Apply greasy cream to whole of skin at least 3 times daily.
- Use wet wraps, unless eczema is infected.
- If infected seek medical advice as soon as possible.
- Use corticosteroid ointment prescribed by your doctor.
- Moisturiser: day ____________________________ night ____________________________
- Corticosteroid ointment: face ____________________________ body ____________________________
- Antibiotic: ____________________________
- Other prescribed medication: ____________________________
- Bath oil or body wash: ____________________________
# Cleansing

<table>
<thead>
<tr>
<th>Soap substitute</th>
<th>Aqueous cream</th>
<th>Hydromol ointment</th>
<th>Epaderm</th>
<th>Emulsifying ointment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antiseptic soap substitute</td>
<td>Dermol 500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bath additive</td>
<td>Oilatum fragrance free</td>
<td>Diprobath</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antiseptic bath additive</td>
<td>Dermol 600</td>
<td>Emulsiderm</td>
<td>Oilatum plus*</td>
<td></td>
</tr>
</tbody>
</table>
Acute irritant reaction to an antiseptic bath emollient

Saw et al

Emollients

• Patient/parental choice increases compliance
• As liberally and frequently as possible
• Should be prescribed in large quantities:
  – 600g/week in adults
  – 250g/week children
• Using 4 times a day will reduce need for topical steroids by 40%
Topical Steroid Treatment

- The weakest steroid that controls the disease effectively
- Regular review of steroid use in terms of potency and quantity essential
- Advise patient how to use and how much
- Keep under review for local and systemic side effects
  - Skin atrophy
  - Tinea incognito
  - Acne or perioral dermatitis
1. Ointment v Cream
2. Tachyphylaxis
Need for therapeutic advances
Topical Immunomodulators

- Topical calcineurin inhibitors
- Suppression of T-cells
- Binds FK-506 binding protein-12, forms complex and blocks calcineurin
Topical Immunomodulators

Topical tacrolimus Ointment

- Protopic (Astellas Pharma)
  - 0.03%
  - 0.1%

Equivalent to potent topical steroid

Topical Pimecrolimus Cream

- Elidel (Novartis)
  - Equivalent to hydrocortisone
Initiated by Dermatologist or GPwSI
2nd line mod/severe eczema not controlled by steroids
Patients at risk of steroid side effects
  – Skin atrophy
Patients must be informed of potential risks v benefits

Tacrolimus
  – 2nd line mod/severe eczema
  – Adults (0.1%) and children >2yrs (0.03%)

Pimecrolimus
  – 2nd line mod/severe eczema face & neck
  – 2-16 yrs
Safety data

• Side effects
  – Burning, tingling, pruritus
  – Acne, folliculitis
  – Skin infections

• Long-term risks
  – Theoretical risk skin cancer

• Alternative second line agents
  – Systemic corticosteroids
  – Phototherapy
  – Systemic immunosuppression
Tacrolimus safety data
The safety of tacrolimus ointment for the treatment of atopic dermatitis: a review  M Rustin BJD 2007 157 p861-873

- Over 14yrs clinical experience
- Low or no systemic absorption after topical application
- Overall long-term use not associated with increased infections
- No evidence increased carcinogenicity in animal studies
- No causal link with malignancy
Our practice

- Practical Hints
  - Be sure of diagnosis
  - Avoid sun exposure
  - Education: Stop if suspect infection
  - Six-monthly review in clinic
  - Maintenance therapy
Clinical Practice

- Off licence uses in hospital practice
  - Vitiligo
  - Seborrheic dermatitis, Contact dermatitis
  - Perioral dermatitis
  - Lichen sclerosus
  - Lichen planus
  - Panniculitis (under occlusion)
  - Granuloma Annulare
We are here to help

- Diagnosis uncertain
- Education
  - application of treatment
  - Compliance issues
- Severe social or psychological problems
  - school absenteeism
- Contact dermatitis is suspected
- CBT ‘Habit Reversal’
- Severe disease not responding to appropriate therapy
  - potent steroids required
- Recurrent secondary bacterial infection
- Eczema Herpeticum suspected (urgent referral)
Questions?
The Sun Damaged Patient
An approach to managing and referring skin lesions

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Key Learning Objectives

• Clinical assessment of sun damaged skin
• Sun awareness education
• Approach to managing lesions in the community
  – Actinic keratosis
    • Topical therapies
  – Bowen’s disease
  – Common benign lesions
• Lesions to refer into hospital based dermatology
  – Basal cell carcinoma
  – Squamous cell carcinoma
  – Melanoma
    • Mole mapping service
Where to start
Approach to the sun damaged patient
History

- UV exposure
  - Lived abroad for more than 6 months
  - Childhood sunburn
  - Outdoor hobbies
  - Sun bed use

- Previous history skin cancer or mole excision
  - if yes, what, when, what treatment?

- Family history skin cancer

- Immunosuppressed

- Previous phototherapy/radiotherapy

- Skin type: ‘tanner v burner’
Fitzpatrick Skin Types

Type 1
White: Always burns, never tans

Type 2
White: Usually burns, difficulty in tanning

Type 3
White: Sometimes burns, average tan

Type 4
Moderate Brown: Rarely burns, tans with ease

Type 5
Dark Brown: Very rarely burns, tans very easily

Type 6
Black: Does not burn, tans very easily

Skin Type 1 has the least melanin, therefore will heat up least, so highest energies can be used
Examination

- Expose
- Full skin check
  - top to toe
- Easy to miss sites
  - palms, soles, webspaces, scalp
- Educate as you examine
- Assessment approach
  - ABCDE
  - ‘Ugly Duckling’ naevus
Assessment of naevi

ABCDEs of skin cancer

A. Asymmetry
B. Border
C. Color
D. Diameter
E. Evolving
Assessment of naevi

Figure 1. Three Examples of an Ugly Duckling

A

B

C
Assessment of naevi
Dermoscopy

• Skin surface microscopy
• Non-invasive, in vivo technique
• Visualization of subsurface skin structures in the epidermis, dermoepidermal junction, and upper dermis
• Use in clinical assessment
  – Pigmented lesions
  – Non-pigmented lesions
  – Identification of benign lesions
  – Teledermatology (teledermscopy)
Dermoscopy
Education

• No more ‘sunbathing’
• Avoid peak hours sun exposure
• Seek shade (40% UVB)
• Keep covered with loose fitting cotton clothing and hat (4” brim)
• Sunblock (SPF 30-50+) apply sufficient quantities and reapply
• ‘Anti-aging’
• Vitamin D
Clinical case

- 70 year old patient
- Type 1 skin
- Served overseas in army
- Recurrent scaling erythematous macules and patches
- Occassional crusting/scab formation
- Distribution in sun exposed sites
Actinic or solar keratosis

• Actinic keratoses (AK) are keratotic macules, papules or plaques
• Result from intra epidermal proliferation of atypical keratinocytes in response to prolonged UV exposure.
• Most AKs do not progress to cancer
  – estimated risk 1-4%
• Most SCCs arise from pre-existing AK and lesions with high transformation risk cannot be distinguished clinically from benign lesions.
• Most clinicians advocate treatment of AKs
Treatment actinic keratosis

• Destructive therapies
  – Cryotherapy
  – Surgery
    • Excision
    • Cautery
• Topical medications
  – Diclofenac (Solaraze)
  – 5-fluorouracil (Efudix)
  – Imiquimod 5% cream (Aldara)
  – Ingenol mebutate (Picato)
• Photodynamic therapy
Approach to management

- Multiple effective treatment options
- Choice of therapy patient and lesion dependent
  - Lesion-directed treatment cyotherapy or surgery used in isolated lesions
  - Field-directed therapy for multiple lesions or subclinical change
  - Combination treatments
- Indications for biopsy
  - Indurated lesions
  - Painful, ulcerated lesions
  - Hyperkeratotic lesions failing to respond to treatment
Diclofenac (Solaraze)

- Diclofenac 3% in gel formulation
- Nonsteroidal antiinflammatory drug
  - Inhibits cyclooxygenase and upregulates arachidonic acid cascade
  - Prostaglandin production from arachidonic acid may play a role in UVB induced skin cancer
  - Inhibition of this cascade may explain efficacy in treatment of AK
- Apply twice daily for 90 days
- Meta-analysis 3 RCT (n=364)
  - resolution AK 40% treated compared with placebo 12%
5-fluorouracil (Efudix)

- Inhibits thymidylate synthetase, critical enzyme in DNA synthesis, particularly in fast growing dysplastic cells
- Causes inflammation and destruction of AK
- 2-4 weeks active treatment, with inflammation taking 2 weeks to subside
- Two systematic reviews
  - 90% efficacy in flat AK, 50% efficacy rate hyperkeratotic AK for 100% AK clearance
- Long term control
  - RCT (n=932) 2.6 year follow up after a standard 4 week treatment. Reduction in rate AK overall, 6 month clearance rate 38%
Ingenol mebutate (Picato)

• Derived from sap of *Euphorbia peplus* plant
• Mechanism of action:
  – Disruption of cell plasma membranes and mitochondria leading to cell necrosis
  – Induction of neutrophil-mediated antibody dependent cellular cytotoxicity
• Two formulations
  – 0.015% 3 day treatment to face and scalp
  – 0.05% 2 day treatment trunk or extremities
• Evidence
  – 2 randomised trials (n=547) complete clearance AK 42% v 4% placebo
Imiquimod (Aldara)

- Imiquimod 5% cream
- Topical immune response modifier that stimulates local cytokine induction
- Twice weekly for 16 weeks
- (4 days a week 6 weeks)
- Evidence complete resolution AK in 50% treatment v 5% placebo
Clinical case

• 65 year old plaque on hand 4 months
• PMH psoriasis
• No response to usual steroid cream
• Scaling and red, occasionally itchy
• Non-tender
Bowen’s Disease

• Intraepidermal SCC

• Treatment
  – Cryotherapy
  – Surgery
    • Excision
    • Cautery
  – Topical
    • Aldara
    • Efudix
  – Photodynamic therapy
Clinical case

- 50 year old patient
- 1 year history of brown lesion on face
- Darker in summer months
- Anxious because has always enjoyed sunbathing, with frequent holidays abroad
Case discussion

Solar lentigo

Lentigo maligna and lentigo maligna melanoma
Clinical case

- Patient attended surgery for suspected chest infection
- On auscultating chest GP noticed a number of pigmented lesions, one of which was darker
- Patient not aware of the lesions ‘difficulty seeing her back’, but does report occasional itching
Seborrheic keratosis

- Common harmless skin lesion
- Appear stuck on like barnacles
- Cause unknown
- Felt to be degenerative in nature, appearing as part of the ageing process
- Treatment
  - Cryotherapy
  - Curettage
  - Laser destruction

Irregular crypts

Milia like cysts
Basal Cell Carcinoma

• Treatment
  – Surgery
    • Excision
    • Curettage and cautery
    • Mohs micrographic surgery - High risk sites/ recurrence
  – Photodynamic therapy
  – Cryotherapy
  – Radiotherapy
  – Topical therapy evidence for use in superficial BCC only
    • 5-FU
    • Imiquimod
Squamous Cell Carcinoma
Melanoma

- Superficial spreading melanoma (SSM)
- Lentigo maligna melanoma (sun damaged skin of face, scalp and neck)
- Acral lentiginous melanoma (on soles of feet, palms of hands or under the nails – the subungual melanoma)
- Nodular melanoma (presenting as a rapidly enlarging lump)
- Mucosal melanoma (arising on lips, eyelids, vulva, penis, anus)
- Desmoplastic melanoma (fibrous tumour with a tendency to grow down nerves)
Clinical cases

- Patient has noticed a brown streak in his nail
- Not sure how long present for

- Patient noticed sudden onset dark mark in nail
- Unsure if traumatised but has been recently moving house
Case discussion
Mole mapping at Hammersmith Hospital

• Referral into the service following consultant dermatologist review

• Criteria for inclusion
  – 150-200 naevi with atypical features
  – Strong FH melanoma
  – Previous history melanoma or multiple dysplastic naevi
  – Exceptions…

• Baseline photographs, 6 months and 12 months
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Thank you