Dermatology cases: what not to miss!

Dr Mabs Chowdhury FRCP PFHEA
Consultant Dermatologist and Senior Lecturer
University Hospital of Wales
Cardiff

RCP Update in Medicine, Cardiff
24 November 2022
Declarations

President, British Association of Dermatologists

• Officer on Executive Committee of Charity

Clinical Lead for e-learning for Health, British Association of Dermatologists

• Paid post 2 years; now unpaid since Sept 2021
Interactive session

Sudden flare: is this my eczema, doc?

Drug rash or not?

A facial rash for 2 years
Sudden flare: is this my eczema, doc?
• 25-year old man with a history of widespread eczema
• 24-hour history of this sore rash affecting his face
What is the most likely diagnosis?

A. Idiopathic angioedema
B. Herpes zoster/shingles
C. Eczema herpeticum
D. Atopic dermatitis
E. Lupus erythematosus
What is the most likely diagnosis?

A. Idiopathic angioedema
B. Herpes zoster/shingles
C. Eczema herpeticum
D. Atopic dermatitis
E. Lupus erythematosus
What is the best test to ask for?

A. Bacterial skin swab
B. Autoimmune screen to exclude lupus
C. PCR for herpes simplex
D. Viral skin swab
E. Skin biopsy
What is the best test to ask for?

A. Bacterial skin swab
B. Autoimmune screen to exclude lupus
C. PCR for herpes simplex
D. Viral skin swab
E. Skin biopsy
What are the next steps to manage this?

A. Start topical antivirals
B. Start oral antibiotics
C. Start oral prednisolone
D. Start intravenous antivirals
E. Start topical steroids
What are the next steps to manage this?

A. Start topical antivirals
B. Start oral antibiotics
C. Start oral prednisolone
D. Start intravenous antivirals
E. Start topical steroids
Eczema herpeticum

- HSV with background of atopic eczema
  - patient is unwell, with fever and swollen local lymph nodes

- Blisters are monomorphic
  - may be filled with clear yellow fluid or thick purulent material
  - often blood-stained i.e. red, purple or black
  - central dimples (umbilication)

- Older blisters crust over and form erosions
  - heal over 2–6 weeks
A 50-year old woman developed this rash within a few days of starting an anti-convulsant medication for her newly diagnosed epilepsy.
Is this a drug rash?
What is the most likely diagnosis?

A. Allergic contact dermatitis
B. Type 1 hypersensitivity reaction
C. Toxic epidermal necrolysis/Stevens Johnson Syndrome
D. Erythroderma
E. Psoriasis
What is the most likely diagnosis?

A. Allergic contact dermatitis
B. Type 1 hypersensitivity reaction
C. Toxic epidermal necrolysis/Stevens-Johnson Syndrome
D. Erythroderma
E. Psoriasis
What is the best test to ask for?

A. Skin patch testing
B. Autoimmune screen to exclude lupus
C. Skin prick testing
D. Specific IgE blood tests
E. Skin biopsy
What is the best test to ask for?

A. Skin patch testing
B. Autoimmune screen to exclude lupus
C. Skin prick testing
D. Specific IgE blood tests
E. Skin biopsy
What is the next initial step to manage this lady?

A. Treat with potent topical steroids
B. Start oral ciclosporin
C. Start oral prednisolone for 6 weeks
D. Start oral methotrexate
E. Arrange urgent transfer to burns unit
What is the next initial step to manage this lady?

A. Treat with potent topical steroids
B. Start oral ciclosporin
C. Start oral prednisolone for 6 weeks
D. Start oral methotrexate
E. Arrange urgent transfer to burns unit
GUIDELINES


1Department of Dermatology, King’s College Hospital NHS Foundation Trust, London SE5 9RS, U.K.
2St Andrews Centre for Plastic Surgery and Burns, Mid Essex Hospital Services NHS Trust, Chelmsford CM1 7ET, U.K.
3British Association of Dermatologists, Wilton House, 4 Fitzroy Square, London W1T 5HQ, U.K.
4Dermatology Unit, Singapore General Hospital, Singapore
5Moorfields Eye Hospital, 162 City Road, London EC1V 2PD, U.K.
6Mucosa and Salivary Biology, Dental Institute, King’s College London, Guy’s Campus, Great Maze Pond, London SE1 9RT, U.K.
7University College Hospital, London NW1 2BU, U.K.
8Clinical Experimental Sciences, Faculty of Medicine, University of Southampton, Southampton General Hospital, Southampton SO16 6YD, U.K.
9Department of Dermatology, Orpington Hospital, Orpington, Kent BR6 9JU, U.K.
10Department of Dermatology, University Hospital of South Manchester NHS Foundation Trust, Manchester M23 9LT, U.K.
11Department of Histopathology and 12Intensive Care Medicine, King’s College Hospital NHS Foundation Trust, London SE5 9RS, U.K.
13Late of the Burns Centre, Chelsea and Westminster NHS Foundation Trust, London SW10 9NH, U.K.
14Department of Burns and Plastic Surgery, University Hospitals of South Manchester, Southmoor Road, Wythenshawe, Manchester M23 9LT, U.K.
15St John’s Institute of Dermatology, Guy’s and St Thomas NHS Foundation Trust, London SE1 9RT, U.K.
Stevens-Johnson syndrome and toxic epidermal necrolysis (18+)

UK guidelines for the management of Stevens-Johnson syndrome/toxic epidermal necrolysis (18+)
Published June 2016

Links and Downloads:
- SJS-TEN SUMMARY OF TREATMENT
- BAD QUANTITATIVE STANDARD: STEVENS JOHNSON SYNDROME AND TOXIC EPIDERMAL NECROLYSIS
- SJS-TEN DISCHARGE LETTER - TEMPLATE
- SJS-TEN PATHWAY OF CARE
Pathway of Care

SJS/TEN Patients

Person with suspected SJS/TEN

Refer immediately to SJS/TEN MDT

Assess severity (SCORTEN)
Institute initial investigation & management
Stop culprit drug

Transfer to centre with experience managing SJS/TEN

SJS/TEN MDT defined management plan

Supportive Care

Consider active intervention

Continuous clinical assessment

Discharge and follow-up

Wound Management

Body surface area epidermal detachment >10%

Transfer to Burn Centre / Medical ICU

Surgical

Conservative
Table 3 SCORTEN calculation

<table>
<thead>
<tr>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age &gt; 40 years</td>
</tr>
<tr>
<td>Presence of malignancy</td>
</tr>
<tr>
<td>Heart rate &gt; 120 beats min⁻¹</td>
</tr>
<tr>
<td>Epidermal detachment &gt; 10% BSA at admission</td>
</tr>
<tr>
<td>Serum urea &gt; 10 mmol L⁻¹</td>
</tr>
<tr>
<td>Serum glucose &gt; 14 mmol L⁻¹</td>
</tr>
<tr>
<td>Bicarbonate &lt; 20 mmol L⁻¹</td>
</tr>
</tbody>
</table>

BSA, body surface area.

Table 4 SCORTEN predicted mortality

<table>
<thead>
<tr>
<th>Number of parameters</th>
<th>Predicted mortality (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>3</td>
<td>32</td>
</tr>
<tr>
<td>4</td>
<td>62</td>
</tr>
<tr>
<td>5</td>
<td>85</td>
</tr>
<tr>
<td>6</td>
<td>95</td>
</tr>
<tr>
<td>7</td>
<td>99</td>
</tr>
</tbody>
</table>

British Journal of Dermatology (2016) 174, pp1194–1227
Table 5 Classification of acute ocular involvement in Stevens–Johnson syndrome/toxic epidermal necrolysis

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild</td>
<td>Eyelid oedema</td>
</tr>
<tr>
<td></td>
<td>±mild conjunctival injection</td>
</tr>
<tr>
<td></td>
<td>±chemosis</td>
</tr>
<tr>
<td>Moderate</td>
<td>Membranous conjunctivitis</td>
</tr>
<tr>
<td></td>
<td>±corneal epithelial defects (&gt; 30% healing with medical therapy)</td>
</tr>
<tr>
<td></td>
<td>±corneal ulceration</td>
</tr>
<tr>
<td></td>
<td>±corneal infiltrates</td>
</tr>
<tr>
<td>Severe</td>
<td>Symblepharon formation</td>
</tr>
<tr>
<td></td>
<td>±nonhealing corneal epithelial defects</td>
</tr>
<tr>
<td></td>
<td>±visual loss</td>
</tr>
<tr>
<td></td>
<td>±conjunctival fornix foreshortening</td>
</tr>
</tbody>
</table>

Table 6 Grading scores for acute ocular severity of Stevens–Johnson syndrome/toxic epidermal necrolysis

<table>
<thead>
<tr>
<th>Grade</th>
<th>Acute ocular manifestations</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No ocular involvement</td>
</tr>
<tr>
<td>1</td>
<td>Conjunctival hyperaemia</td>
</tr>
<tr>
<td>2</td>
<td>Either ocular surface epithelial defect or pseudomembrane formation</td>
</tr>
<tr>
<td>3</td>
<td>Both ocular surface epithelial defect and pseudomembrane formation</td>
</tr>
</tbody>
</table>

Table reproduced from Sotozono et al. 62

British Journal of Dermatology (2016) 174, pp1194–1227
Drug causes of SJS/TEN

- Sulfonamides: cotrimoxazole
- Beta-lactam: penicillins, cephalosporins
- Anti-convulsants: lamotrigine, carbamazepine, phenytoin, phenobarbitone
- Allopurinol
- Paracetamol/acetaminophen
- Nevirapine (non-nucleoside reverse transcriptase inhibitor)
- Nonsteroidal anti-inflammatory drugs (NSAIDs) (oxicam type mainly)
Pathogenesis/Mechanism

- Fas-Fas ligand pathway of apoptosis
  - The Fas ligand, a form of tumour necrosis factor, is secreted by blood lymphocytes and can bind to the Fas ‘death’ receptor expressed by keratinocytes

- Granule-mediated exocytosis via perforin and granzyme B resulting in cytotoxicity (cell death).
  - Perforin and granzyme B can be detected in early blister fluid, and it has been suggested that levels may be associated with disease severity
A facial rash for 2 years

- 60 year old lady
- 2 years
- Rash around eyes, neck
- Red, itchy, dry
- Started on lower eyelids
- Periocular swelling
- No past history of note e.g. eczema, atopy
What is the most likely diagnosis?

A. Allergic contact dermatitis
B. Type 1 hypersensitivity reaction
C. Atopic dermatitis
D. Seborrhoeic dermatitis
E. Lupus erythematosus
What is the most likely diagnosis?

A. Allergic contact dermatitis
B. Type 1 hypersensitivity reaction
C. Atopic dermatitis
D. Seborrhoeic dermatitis
E. Lupus erythematosus
What is the best test to ask for?

A. Skin patch testing
B. Autoimmune screen to exclude lupus
C. Skin prick testing
D. Specific IgE blood tests
E. Skin biopsy
What is the best test to ask for?

A. **Skin patch testing**
B. Autoimmune screen to exclude lupus
C. Skin prick testing
D. Specific IgE blood tests
E. Skin biopsy
Patch test

Baseline and Facial/Cosmetic series tested:
Methylisothiazolinone 1+ and MI/MCI 1+
Balsam of Peru 1+
What is the next best step to manage this lady?

A. Treat with moderate topical steroids
B. Avoid the allergens strictly for 6 weeks
C. Start oral prednisolone for 6 weeks
D. Start oral methotrexate
E. Refer for light treatment/phototherapy
What is the next best step to manage this lady?

A. Treat with moderate topical steroids
B. Avoid the allergens strictly for 6 weeks
C. Start oral prednisolone for 6 weeks
D. Start oral methotrexate
E. Refer for light treatment/phototherapy
Products commonly containing Methylisothiazolinone (MI)

<table>
<thead>
<tr>
<th>Personal care products</th>
<th>Household products</th>
<th>Industrial products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunscreens</td>
<td>Fresh paint</td>
<td>Fuels</td>
</tr>
<tr>
<td>Cosmetics</td>
<td>Detergents</td>
<td>Glues</td>
</tr>
<tr>
<td>Creams and moisturisers</td>
<td>Fabric conditioners</td>
<td>Cutting oils</td>
</tr>
<tr>
<td>Shampoos and conditioners</td>
<td>Washing up liquid</td>
<td>Coolants</td>
</tr>
<tr>
<td>Soaps and shower gels</td>
<td>Toilet wipes</td>
<td>Resin emulsions</td>
</tr>
<tr>
<td>Wet wipes</td>
<td>Glues</td>
<td></td>
</tr>
<tr>
<td>Deodorants</td>
<td>Watercolours</td>
<td></td>
</tr>
<tr>
<td>Bubble bath</td>
<td>Polishes</td>
<td></td>
</tr>
</tbody>
</table>
Prevalence of patients with positive patch test reactions to MI/MCI

Products containing methylisothiazolinone

1. Piz Buin
   1 Day Long Lotion, 200ml £19.99

2. L'Oreal Paris
   Triple Active Day
   Multi-Protection
   Moisturiser, 50ml £6.49

3. Sanctuary
   Mini Mande Lular Body Soufflé, 50ml £2.50

4. Clarins Paris
   Exfoliating Body Scrub for Smooth Skin, 200ml £29.99

5. Olay
   Professional Exfoliating Cream Cleanser, 150ml £14.99

6. Nivea
   Body Lotion Express Hydration, 400ml £5.10
Problematic Personal Care Product Preservative "MI":

Still in Your Stuff But Finally Catches Attention of Mainstream Media

Preservative methylisothiazolinone (MI) is causing nerve damage, scarring, eczema, and a host of other serious reactions.

Its use as grown in recent years; it can be found in a wide variety of personal care products.

READ THE INGREDIENTS LABELS!

Chemical-Free-Life.org / ChemicalFreeLife.tumblr.com
Allergy to hair dye

• para-Phenylene Diamine (PPD) allergy increasing

• Doubling in 6 years to 7%
• 15% with hair dye allergy seek referral
• Increasing hair dyeing
• “Culture of youth”

• What has increased the risk of PPD allergy?
Black Henna Tattoos with PPD
Tenby: voted best beach in UK
James Colley @jagcolley · Jul 10
Got a €10 @MikeTyson henna tattoo in Zante, it's only gone and scarred my face for the next 3-5 years! #happydays
Dermatology Training: the Essentials

B.A.D. Training Textbook mapped to the syllabus for ST3/ST4

- Published by Wiley Feb 2022
- Editors: MM Chowdhury, TW Griffiths, AY Finlay
- Expert authors (pro bono)
- Trainee feedback on chapters
  - 29 chapters
  - SCE questions for each chapter
  - Chapters all mapped to CiPs