bulla

ulcer

nodule

vesicle

Scar
crust  scab
Contact Dermatitis
Definition

Contact dermatitis is an inflammation of the skin caused by direct contact with an irritating or allergy-causing substance.

- **Irritant** = irritating
  - acid, base, metal salt and etc.
- **Allergen** = allergy-causing substance
  - dye, oil, chemical used for fabrics, rubbers, cosmetic and etc.
Classification

irritant contact dermatitis

allergic contact dermatitis
Irritant dermatitis is an inflammatory reaction in the skin resulting from exposure to a substance that cause an eruption in most people who come in contact with it.

Allergic contact dermatitis is an acquired sensitivity to various substances that produce inflammatory reactions in those, and only those, who have been previously exposed to the allergen.
irritant contact dermatitis by strong acid

Acid produces a brownish scab of the skin, beneath which is an ulceration that heals slowly.
irritant contact dermatitis caused by strong base
bullae, erythema

irritant contact dermatitis
(pesticide)
irritant contact dermatitis caused by chemical
allergic contact dermatitis

( drug to treat underarm odour )

underarm odour = bromhidrosis
The bromidrosis is caused by bacterial decomposition of apocrine sweat, producing fatty acids with distinctive offensive odours.
Chronic allergic contact dermatitis
metal claspers  lichenification
subacute allergic contact dermatitis
metal buckle
acute allergic contact dermatitis
plant
A large number of plants, including trees, grasses, flowers, vegetables, fruits, and weeds, are potential causes of dermatitis.

For example

poison ivy

mango
allergic contact dermatitis cosmetic
allergic contact dermatitis

cosmetic
allergic contact dermatitis

cosmetic
Post-treatment
allergic contact dermatitis
caused by mango
Edema of foreskin

allergic contact dermatitis

drug
allergic contact dermatitis

drug
# The Difference

<table>
<thead>
<tr>
<th>Substance</th>
<th>acids</th>
<th>alkaline</th>
<th>varied</th>
</tr>
</thead>
<tbody>
<tr>
<td>The reaction</td>
<td>burn</td>
<td></td>
<td>allergic</td>
</tr>
<tr>
<td>Feeling</td>
<td>pain</td>
<td></td>
<td>itch</td>
</tr>
<tr>
<td>People</td>
<td>everyone</td>
<td></td>
<td>someone</td>
</tr>
<tr>
<td>latent period</td>
<td>no</td>
<td></td>
<td>yes</td>
</tr>
<tr>
<td>Patch test</td>
<td>do not use it</td>
<td></td>
<td>positive</td>
</tr>
</tbody>
</table>
**Patch test**

A piece of blotting paper is soaked with the suspected allergen, then it is taped to your skin for 24 to 48 hours. If a rash develops on the site, there is an allergen.
The patch sites need to be evaluated after 2 day

The patch sites need to be evaluated again at 4 or 5 day, because positive reaction may not appear earlier.
Allergy Skin Prick Test
Clinical Manifestation

- contact spot
- with clear boundary
- erythema or blister
- transparent itch or pain
- course: 1—2w
- long-term repeatedly contact: lichenification
Diagnosis

1. contact history
2. clinical manifestation
3. patch test
**Treatment**

Firstly, far from the allergen or irritant

(1) to get rid of suspected allergen

(2) local treatment

(3) systemic treatment

- antihistamine
- calcium, Vitamin C
- corticosteroids
For the acute dermatitis, wet compresses of solution are the treatment of choice.
Chronic allergic contact dermatitis
metal claspsers lichenification
When the eruption is limited, local application of topical corticosteroid cream is superior to any other local application.
Drug Eruption
Definition

An adverse cutaneous reaction produced by ingestion, parenteral use, or local application of a drug, which may produce various morphologic patterns and types of lesions.

It is also called drug rash.
Drug eruption easily caused by

1. antibiotic
2. NSAIDs (nonsteroidal antiinflammatory drug)
3. sulfa drug
4. sedative
5. blood serum and antitoxin
6. traditional Chinese medicine
Pathogenesis

（1）allergic reaction (most)

（2）non-allergic reaction (a few)
Features of allergic drug eruption

1. Occur in a few persons
2. Not relate to pharcemic action and dosage
3. Latent period is commonly 4-20 days
4. Lesion is multiple
5. Cross-reaction
6. Corticosteroid is effective
Clinical Manifestation

1. mild drug rash
   1) Fixed drug eruption
   2) Urticarial eruption
   3) Exanthems
4) Erythema multiforme drug eruption

5) Purpuric drug eruption
Fixed drug eruption
Urticarial drug eruption
Exanthems
Exanthems
Erythema multiforme
drug eruption
Erythema multiform

Typically, a ring of erythema forms around the periphery, and centrally the lesions become flatter, more purpuric, and dusky.

The lesion is the classic target or iris.
Purpuric drug eruption
1. Severe drug eruption

1) exfoliative dermatitis

2) drug-induced bullosa epidermolysis

3) serious Erythema multiforme drug eruption
drug-induced bullosa epidermolysis
Exfoliative dermatitis
Serious erythema multiforme drug eruption
Diagnosis

1. history of taking medicine
2. Latent period
3. Lesion appeared abruptly
4. drug test
Treatment

1. stop using suspected drug
2. local treatment
3. systemic treatment
   A. corticosteroid
   B. calcium
   C. antihistamine
   D. supporting treatment
   E. antibacterial
Localized edema

Acute evanescent circumscribed edema

wheal

Localized edema
Definition of Urticaria （Hives）

• Itchy, swollen, red wheals or patches on the skin that appear suddenly as a result of the body's adverse reaction to certain allergens.

• They can appear anywhere on the body including the face, lips, tongue, throat, or ears. Hives vary in size and can last for minutes or hours.
Definition of Angioedema

Swelling similar to urticaria (hives), but the swelling occurs beneath the skin instead of on the surface. Angioedema is characterized by deep swelling around the eyes and lips and sometimes of the scrotum.

The most distensible tissues
Introduction

Urticaria and Angioedema

Urticaria

Angioedema is a special urticaria, is called giant urticaria
Incidence and Prevalence of Urticaria

Urticaria is extremely common

15% to 25% of the population experience an urticaria at some time in life

40% will experience urticaria alone

10% will experience angioedema alone

50% will have urticaria and angioedema at the same time
Classification of Urticarial

• Acute Urticaria
  - Evolves over days to weeks
  - Wheal individual last less than 24 hrs
  - Resolution within 6 weeks of onset

• Chronic Urticaria
  - Daily episode of urticaria lasting more than 6 weeks
Etiology of Urticarial Allergic Triggers

• **Acute Urticaria**
  – Drugs
  – Foods
  – Food additives
  – Viral infections
  – Insect bites and stings
  – Contactants and inhalants (includes animal dander and latex)

• **Chronic Urticaria**
  – Physical factors
    • cold
    • heat
    • dermatographic
    • pressure
    • solar
  – Idiopathic
The Pathogenesis of Urticaria: Cellular Mediators

The urticarial wheal

Increased capillary permeability, which allows proteins and fluids to extravasate

Increased of histamine from the mast cells situated around the capillary

The mast cell is the primary effector cell in urticarial reaction
When mast cell release the histamine

• When mast cell release the histamine
• The capillary permeability will increase
• The small vessel will be dilative
• There are some other changes happening
• But in the pathogenesis of urticaria they are the most important
Clinical Manifestation

Acute Urticaria

- wheal, erythema
- last few minutes to few hours
- appear suddenly and disappear soon
- without trails after extinction
- severe cases
Severe cases of urticaria

There are a lot of accompany syndromes in severe case. Some syndromes are life-threatening

respiratory tract shortness of the breath

gastrointestinal tract nausea, vomiting, abdominal pain

cardiovascular system hypotension
Severe cases of urticaria

The edema can appear on skin and in the mucous membrane of respiratory tract, gastrointestinal tract, and accompany the dilatation of small vessel.
Dermatographia is a sharply localized edema or wheal with a surrounding erythematous flare occurring within seconds to minutes after the skin has been stroked.
Diagnosis

- wheal erythema
- onset and disappear suddenly
- itch
Treatment of Urticaria
Pharmacologic Options

- **Antihistamines**
  - First-generation H₁
  - Second-generation H₁
  - Tricyclic antidepressants (eg, doxepin)
  - Combined H₁ and H₂ agents

- **Corticosteroids**
  - Severe acute urticaria
    - avoid long-term use
Treatment of Urticaria
Pharmacologic Options

calcium, Vitamin C

10% calcium gluconate solution
Reduce the capillary permeability

local treatment
Lotion contains menthol, phenol, camphor is helpful to antipruritic

薄荷，酚，樟脑
**H₁-Receptor Antagonists**  
**Pros and Cons for Urticaria and Angioedema**

- **First-generation antihistamines**
- **Advantages:** relatively inexpensive
  - **Disadvantages:** Sedating, anticholinergic
H₁-Receptor Antagonists:
Pros and Cons for Urticaria and Angioedema

• Second-generation antihistamines
  – Advantages: No sedation; no adverse anticholinergic effects;
  – Disadvantages: Prolongation of QT interval; ventricular tachycardia (astemizole only) in a patient subgroup

阿司咪唑 西替利嗪 非索非那定 氯雷他定
湿疹

Eczema

- 非传染性
- 变态反应性
- 炎症性
- 皮疹形态多样
- 自觉瘙痒
- 易复发
病因及发病机理（Pathogenesis）

外因：食物、吸入物、病原微生物、日光、气候、化妆品、肥皂洗衣粉等

内因：慢性感染病灶、内分泌及代谢改变、循环障碍、精神神经因素、遗传因素——异位性皮炎

发病机理：主要为IV型变态反应
临床表现（Clinical manifestation）

根据皮损的形态分为三期

- 急性湿疹
- 亚急性湿疹
- 慢性湿疹
（一）急性湿疹

- 多形性皮损
- 渗出明显
- 剧痒和灼热感
- 夜晚加重
急性湿疹
急性湿疹
急性湿疹
infectious eczematoid dermatitis
（二）亚急性湿疹

- 红斑、水疱、渗出、瘙痒减轻
- 糜烂逐渐愈合
- 鳞屑及结痂明显
亚急性湿疹
亚 急 性 湿 疹
亚急性湿疹
（三）慢性湿疹

- 由急性及亚急性期迁延
- 皮肤苔藓样变
- 色素沉着或色素减退
- 病情反复
慢性湿疹
慢性湿疹
湿疹的特点

- 多形性
- 对称性
- 易渗出
- 瘙痒
- 易复发
常见的慢性湿疹类型

- 手湿疹——多由接触物引起
- 足湿疹——可由足癣诱发
- 乳房湿疹——多因哺乳引起
- 外阴及肛门湿疹
- 小腿湿疹——多继发于小腿静脉曲张
手湿疹  eczema
肛周湿疹
乳房湿疹
乳房湿疹
脐窝湿疹
淤滯性皮炎（stasis dermatitis）
即静脉曲张性湿疹
淤滞性皮炎（stasis dermatitis）
即静脉曲张性湿疹
特殊类型的湿疹

钱币状湿疹——好发于四肢

皮损直径1–3厘米

汗疱疹——主要见于手足

遗传过敏性皮炎——异位性皮炎

（Atopic Dermatitis）
诊断（Diagolosis）

主要根据皮损特点
鉴别诊断

- 接触性皮炎
- 神经性皮炎
治疗（Treatment）

（一）去除诱因

- 食物
- 理化刺激物
- 消除慢性病灶
- 治疗全身性疾病
（二）内用疗法

**原则：** 消炎、止痒

- **抗组胺药物：** 扑尔敏、酮替酚、息斯敏、克敏能
- **钙剂：** 维丁胶钙、葡萄糖酸钙、益钙灵、钙尔奇
- **普鲁卡因封闭
- **激素：** 应严格控制使用
- **中医中药：** 小柴胡汤、六味地黄丸等
（三）局部治疗

原则：清洁、止痒、抗菌消炎、收敛及角质促成剂

1. 急性湿疹 湿敷为主 3%硼酸、0.1%雷佛奴尔

2. 亚急性湿疹 焦油类、皮质类固醇乳剂、糊剂等

3. 慢性湿疹 煤焦油类、皮质类固醇软膏或霜剂
Test