

Difference Between Atopic Dermatitis and Contact Dermatitis

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Key Difference – Atopic Dermatitis vs Contact Dermatitis

The term *dermatitis* is used to describe a common group of inflammatory skin diseases. The term [eczema](#) is another word which is synonymous with the same condition. Dermatitis can be classified into two categories as endogenous and exogenous dermatitis. Atopic dermatitis is an example of endogenous dermatitis, and contact dermatitis is an example of exogenous dermatitis. **Contact dermatitis can be defined as dermatitis precipitated by exogenous agents, often a chemical. Atopic dermatitis can be defined as a familial, genetically complex dermatological disorder with a strong maternal influence.** This is the key difference between atopic dermatitis and contact dermatitis. Erythema, skin changes like dryness, scaling, and pruritus are the common clinical features associated with this order.

What is Atopic Dermatitis?

Atopic dermatitis can be defined as a familial, genetically complex dermatological disorder with a strong maternal influence. This condition is associated with other atopic diseases and usually starts under the age of 2 years. Although the pathophysiology of the condition is not fully understood, abnormalities in skin barrier function together with abnormalities of both adaptive and innate immunity seem to be important.

Exacerbating Factors

- [Infections](#)
- Soap, bubble bath, woolen fabric
- Teething in young children
- Severe [anxiety and stress](#)
- Cat and dog dander

Clinical Features

A variable clinical presentation can be seen in atopic dermatitis. Most commonly we can see erythematous, itchy, scaly patches mainly, in the flexures of the elbows, knees, ankles, wrists and around the neck. Other clinical features that appear in atopic dermatitis are

- Appearance of small vesicles
- Excoriation
- Skin thickening(lichenification)
- Pigmentary changes of the skin
- Prominent skin creases on palms
- Dry, 'fish-like' scaling of the skin



Figure 01: Close up of Atopic Dermatitis

Investigations

History and clinical features are crucial in the diagnosis of atopic dermatitis. Laboratory findings such as raised total serum IgE, allergen-specific IgE, and mild eosinophilia can be seen in about 80% of the patients.

Management

- Education and explanation
- Avoidance of allergens and irritants
- Bath oils/soap substitutes
- Use topical therapies of steroids and immunomodulators
- Emollients
- Using adjunct therapies like oral antibiotics, sedating antihistamines and bandaging
- Phototherapy
- Systemic therapies of oral ciclosporin and oral prednisolone

What is Contact Dermatitis?

Contact dermatitis can be defined as dermatitis precipitated by exogenous agents, often a chemical. Nickel sensitivity is the commonest contact [allergy](#), affecting 10% of women and 1% of men.

Etiopathogenesis

Contact dermatitis is mostly caused by irritants than [allergens](#). But the clinical appearances of both seem to be similar. Allergic contact dermatitis is caused immunologically by type IV hypersensitivity reactions. The mechanism by which irritants cause dermatitis varies, but the direct noxious effect on the skin's barrier function is the most frequently observed mechanism.

The most important irritants associated with contact dermatitis are;

- Abrasives ex: frictional irritancy
- Water and other fluids
- Chemicals ex: acids and alkalis
- Solvents and detergents

The effect of most of these irritants is chronic, but a strong irritant causing necrosis of epidermal cells may produce a reaction within few hours. Dermatitis can be induced by repetitive and cumulative exposure to water abrasives and chemicals over several months or years. This commonly occurs on hands. The susceptibility to contact dermatitis is high if individuals have a history of atopic eczema to irritants.

Clinical Presentation

Dermatitis can affect any part of the body. When dermatitis appears at a particular site, it suggests a contact with a certain object. When a patient having a history of Nickel allergy presents with eczema on the wrist, this suggests an allergic response to a watch strap buckle. It is easy to list the possible causes by knowing the patient's occupation, hobbies, past history and use of cosmetics or medicaments. Environmental sources of some common allergens are given below.

Allergen	Source
Chromate	Cement, tanned leather
Cobalt	Primer paint, anti corrosive
Colophony	Glue, plasticizer, adhesive tape, varnish, polish
Epoxy resins	Adhesive, plastics, moldings
Fragrance	Cosmetics, creams, soaps, detergents

Through secondary 'auto sensitization' spread, allergic contact dermatitis can occasionally become generalized. The photo contact reaction is caused by the activation of a topically or systemically administered agent by ultraviolet radiation.



Figure 02: Contact Dermatitis

Management

The management of contact dermatitis is not always easy due to many and often overlapping factors which can be involved in any one case. The overriding objective is the identification of any offending allergen or irritant. Patch testing is particularly useful in dermatitis of the face, hands, and feet. It helps in identifying any allergens involved. The exclusion of an offending allergen from the environment is desirable in clearing dermatitis.

But some allergens like Nickel or colophony are difficult to eliminate. Moreover, it is impossible to exclude irritants. Contact of irritants during certain occupations is inevitable. Protective clothing should be worn, adequate washing and drying facilities should be provided in order to minimize the contact with such irritants. Secondary to avoidance measures, patients can use topical steroids in contact dermatitis.

What are the similarities between Atopic Dermatitis and Contact Dermatitis?

- Atopic dermatitis and contact dermatitis are inflammatory dermatological conditions

What is the difference between Atopic Dermatitis and Contact Dermatitis?

Atopic Dermatitis vs Contact Dermatitis	
Atopic dermatitis can be defined as a familial, genetically complex dermatological disorder with a strong maternal influence.	Contact dermatitis can be defined as dermatitis precipitated by exogenous agents, often a chemical.
Monomers used in Manufacturing	
Atopic dermatitis is a form of endogenous dermatitis.	Contact dermatitis is a form of exogenous dermatitis.
Properties	
There is no strong genetic predisposition.	There is a strong genetic predisposition.

Summary – Atopic Dermatitis vs Contact Dermatitis

Contact dermatitis and atopic dermatitis are two inflammatory skin disorders commonly encountered in the clinical setup. The difference between contact dermatitis and atopic dermatitis can be identified by a proper patient history. Avoiding the exposure to the particular irritant or allergen is the mainstay of the management.

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