

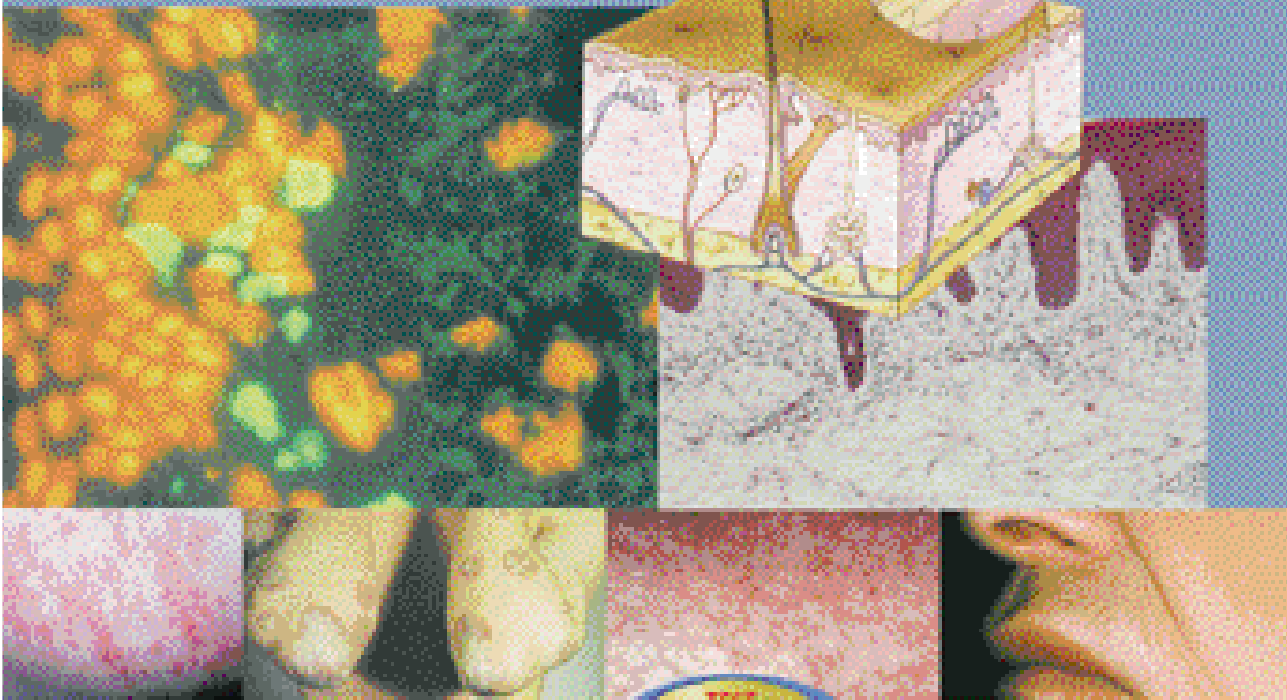
JANUARY 2003 VOL 11 NO 1 ISSN 1681-5552

Happy
New Year 2003

the **SQUARE**

healthcare bulletin

- ◆ Common Dermatological Disorders
- ◆ Eczema
- ◆ Pruritus
- ◆ Urticaria
- ◆ Product Profile: Oni®
- ◆ Glimpse of MSD Activities 2002
- ◆ *SQUARE* in International Business
- ◆ Medical Updates



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"the SQUARE"

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From the Desk of Managing Editor

Dear Doctor:

Greetings everyone and Happy New Year!

Welcome to this edition of "the SQUARE"! You have already noticed the new look of this issue! We have updated our design to make it more enjoyable for you.

Our vision and determination is to give you the most accurate, reliable and easy to understand health information every time. This issue of "the SQUARE" is "Dermatology" special and includes updated information on common dermatological disorders, pruritus, eczema, urticaria. Besides, our regular features comprise, medical updates, product profile and others.

We welcome your suggestions and comments to help us provide the highest quality and most useful service. In addition we appreciate all of the comments and feedback we have received from those who have taken the time to write.

We believe you will enjoy reading this publication and that the contents provided will prove helpful towards your goal of optimum health!

We, on behalf of the management of SQUARE hope and pray that you have a safe and healthy life throughout all of 2003!


Omar Akramur Rab

ISSN 1681-5552

Key title: The SQUARE (Dhaka)

Abbreviated key title: SQUARE (Dhaka)

Common Dermatological Disorders

The skin, the largest organ of the body helps define ones look on the outside. Any disorders of skin can affect both physical and mental well being. Besides dermatological disorders, one of the major health concern of our society. Here we have focused on some common skin disorders.

DERMATITIS

Dermatitis includes various skin disorders. It may be defined as a superficial inflammation of the skin that in most cases is characterized by erythema and pruritus.

Type

- Endogenous dermatitis i.e. atopic dermatitis
- Exogenous dermatitis i.e. contact dermatitis

Atopic dermatitis

Atopic dermatitis is a form of endogenous dermatitis, often appears as a skin eruption in childhood. Eczema is a common type of atopic dermatitis.

Contact dermatitis

Contact dermatitis may result from irritation of skin exposed to a strong irritant substances such as strong acid or base.

Topical agents that may cause dermatitis

Antibiotics	Neomycin, Sulphonamide
Antihistamines	Diphenhydramine, Ethylenediamine
Antiseptic	Iodine, Mercury
Emollient	Lanolin
Emulsifiers	Magnesium aluminium silicate Propylene glycol monostearate Sodium lauryl sulfate, Tween, Span
Emulsion stabilizers	Carbomer, Cetyl alcohol, Stearyl alcohol Glyceryl monostearate, Methylcellulose
Irritants	Benzoyl peroxide
Keratins	Urea
Local Anaesthetics	Benzocaine
Preservatives	Creosol, Parabens
Sunscreens	Benzophenones Para-aminobenzoic acid.

DRY SKIN (XEROSIS)

Dry or chapped skin is usually a seasonal problem, especially during the winter. Dry skin becomes more problematic as one ages increase, since skin becomes thinner and is unable to remain hydrated.

TREATMENT

Treatment of dermatitis begins with non drug treatment or compliance with daily living functions that will not make the condition worse. An important first step is to use a mild soap that has minimal drying effects. The goal of the drug treatment is to provide relief from itching and

return the affected skin area to a normal hydrated state. Treatment of dry, rough or scaly skin includes the following-

- A colloidal oatmeal/ oiled oatmeal both relieves itching. This treatment is very successful measures in case of children. Excessive bathing is not recommended.
- Emollients/ lubricants such as mineral oil, petrolatum and refined lanolin help retain water in the dermis.
- Humectants i.e glycerin, sorbitol and propylene glycol help to draw water into the skin to hydrate the dermis.
- Keratin softening agents i.e allantoin, glycolic acid, lactic acid and urea soften rough and dry skin.
- Antipruritic agent minimize itching i.e. local topical anaesthetics, antihistamines and topical steroids.

SCALY DERMATOSES

Dandruff: Dandruff usually occurs during puberty and lasts through adulthood. The epidermal cell turnover in dandruff is two times faster than normal and is associated with mild to severe itching.

Seborrheic dermatitis: Seborrheic dermatitis or seborrhea is common in adults and in the elderly. Seborrhea mainly occurs in the scalp, face and trunk. Cradle crap is the seborrhea of the scalp in infants. Seborrheic dermatitis is associated with mild to severe itching.

Psoriasis: Psoriasis is more common to bony area i.e. elbows or knees. Anti-malarials agent, beta-blockers and lithium may exacerbate psoriasis. Psoriasis is associated with dry skin and it usually have a positive family history.



Typical site of psoriasis

TREATMENTS

Dandruff: Treatment of dandruff includes frequent shampooing or the use of a medicated shampoo containing a cytostatic agents (i.e tars, pyrithione zinc 2% or selenium sulphide 1%) to decrease cell turnover and/or a keratolytic agents (salicylic acid 1.8- 3%, sulphar 2%-5%, salicylic acid 2%-3% plus sulphar upto 5%) to help loosen and debride particles from scalp. Anti fungal agent such as Ketoconazole 1% shampoo may also used in the treatment of dandruff. ▶

Seborrhea: Management of seborrhea includes the use of a medicated shampoo containing cytostatic agents or keratolytics along with topical steroids i.e Hydrocortisone 1% solution or lotion. Infant cradle cap should be managed by gentle shampoo with head massage with small amount of baby oil.

FUNGAL INFECTIONS

Cutaneous candidiasis: Cutaneous candidiasis or moniliasis are associated with yeast ranges from red and moist to dry or scaly in appearance. These lesion appears to be rimmed with sharp borders and surrounded by satellite lesions. Yeast infection usually occurring in areas of moisture and heat such as on the groin, vagina, axilla, interdigital spaces, under the breast or corner of the mouth. Broad spectrum antibiotics, corticosteroids, pregnancy, obesity, diabetes and compromised immune systems are known to produce candidiasis.

Vulvovaginal candidiasis:

The hallmark syndrome of vulvovaginal candidiasis is intense, constant vaginal itching. Risk factor include childbearing age, pregnancy, use of estrogen containing oral contraceptive pill, corticosteroids, obesity, HIV infection, compromised immune system and wearing undergarments that retain moisture.



Fungal infection; rimmed with sharp border

Dermatophytes infection: Fungal infection due to tinea thrive in warm climate and in moist condition. Tinea is easily spread to other areas of the body by self inoculation and can be passed on the other family members.

- Tinea capitis: is usually seen in children. Hair loss is common and crusted lesions are associated with severe infections.
- Tinea corporis: this type of ring worm infections are most often occurs in children. It has a characteristic circular lesions on the arms or legs that is rimmed in appearance and cause intense itching.
- Tinea cruris: jock itch is a rash that occurs in males in upper thigh and pubic areas. The lesions are ring in appearance and produce mild itching.
- Tinea pedis or athletes foot usually involves the interdigital spaces of the third, fourth and fifth toes. The lesions are commonly macerated but have scaly borders. The lesion may be vesicular and weep in

severe cases. In almost all cases there is intense itching and burning of the affected area and it usually occurs in adult especially who have diabetes.

- Tinea versicolor (sun spot) is patch like in appearance and is usually seen on the upper arms. The patches are usually light color and more in the summer months.

TREATMENT OF FUNGAL INFECTIONS

Treatment of fungal infections may consist of topical or systemic agent, used singly or in combination.

Topical agents: Topical treatment alone may be sufficient for tinea infections. It can be divided into three categories.

Imidazoles: Most commonly used topical imidazole are

- ◆ Econazole 1% is indicated for treatment tinea pedis, tinea cruris, tinea corporis as well as for treatment of cutaneous candidiasis and tinea versicolor.
- ◆ Miconazole 2% is indicated for treatment tinea pedis, tinea cruris, tinea corporis and also cutaneous candidiasis and tinea versicolor.
- ◆ Ketoconazole 2% is indicated for treatment tinea pedis, tinea cruris, tinea corporis, cutaneous candidiasis, tinea versicolor and seborrheic dermatitis.
- ◆ Clotrimazole is used mainly at vaginal candidiasis.

Allylamines: Most commonly used topical allylamines

- ◆ Terbinafine 1% ◆ Naftifine 1% ◆ Butenafine hydrochloride

Polyenes: Polyenes are useful in topical treatment of candidiasis but they have no efficacy against dermatophytes.

- ◆ Amphotericin B: used in in superficial fungal infection
- ◆ Nystatin: used in candidiasis in intertriginous areas.

Additional topical agents

- ◆ Ciclopirox olamine ◆ Haloprogin ◆ Undecylenic acid
- ◆ Tolnaftate

Corticosteroids and antifungal combinations: Topical corticosteroids have been used in combination with topical antifungal agents to add an anti-inflammatory effect.

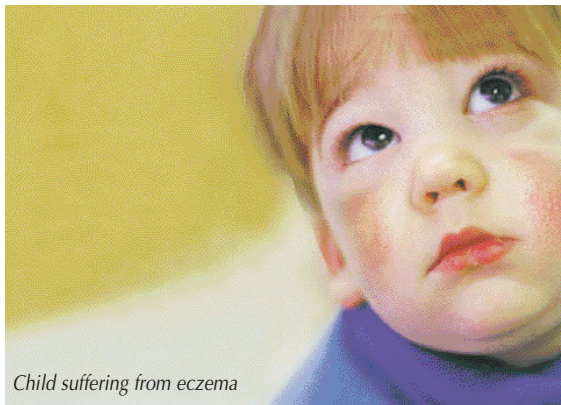
Systemic agents

Following systemic agents are used in the treatment of fungal infection.

- ◆ Griseofulvin ◆ Ketoconazole ◆ Itraconazole
- ◆ Terbinafine ◆ Fluconazole

Reference: U.S. Pharmacist; April 2001.
Post graduate Medicine,2001

Eczema is an inflammation of skin which may cause dryness, flakiness, heat and most importantly itching. Eczema, or dermatitis as it is sometimes called, is a group of skin conditions, which can affect all age groups. The severity of the disease can vary. In mild forms the skin is dry, hot and itchy, whilst in more severe forms the skin can become broken, raw and bleeding. Although it sometimes look unpleasant, eczema is not contagious. With treatment the inflammation of eczema can be reduced, though the skin will always be sensitive to flare-ups and need extra care.



Child suffering from eczema

CAUSES

Many things cause eczema. The commonest is a general allergic over sensitivity (atopy). This sort of eczema is known as atopic eczema, and it is linked with asthma and hayfever. That is, these conditions often run together in a family

The other possible causes include:

- Infantile eczema that often affects young babies. This may lead to a patch below their chins, which gets wettest from dribbling, and may be associated with cradle cap.
- Contact with substances that irritate the skin chemically. This is caused by direct contact between the skin and the substance, which might be such things as detergents, soaps, diesel or engine oils, strong chemicals, cleaners etc.
- Contact with substances that the body has become allergic to. Commonly this involves nickel, rubbers etc. jewellery and watches are still a common cause.

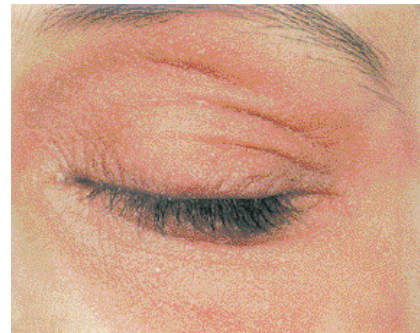
- Varicose veins can lead to a form of eczema affecting the lower legs. This is known as varicose or gravitational eczema.

DIFFERENT TYPES OF ECZEMA

There are several different types of eczema, many of which look similar but they have very different causes and treatments.

Atopic eczema

Atopic eczema is the commonest form of eczema and is closely linked with asthma and hayfever. It can affect both children and adults, usually running in families. One of the most common symptoms of atopic eczema is its itchiness (or pruritus), that can be almost unbearable. Other symptoms include overall dryness of the skin, redness and inflammation. Constant scratching cause the skin to split, leaving it prone to infection. In infected eczema the skin may crack and weep ('wet' eczema).



Atopic eczema: lichenification of the eyelids

Treatments include emollients to maintain skin hydration and steroids to reduce inflammation.

Allergic contact dermatitis

Develops when the body's immune system reacts against a substance in contact with the skin. The allergic reaction often develops over a period of time through repeated contact with the substance.

For example, an allergic reaction may occur to nickel, which is often found in earrings, belt buckles and jeans buttons. To prevent repeated reactions it is best to prevent contact with anything that causes a rash.▶



Contact dermatitis

Irritant contact dermatitis

This is a type of eczema caused by frequent contact with everyday substances, such as detergents and chemicals, which are irritating to the skin. It most commonly occurs on the hands of adults and can be prevented by avoiding the irritants and keeping the skin moisturized.

Infantile seborrhoeic eczema

A common condition affecting babies under one year old, the exact cause of which is unknown. Also referred to as cradle cap, it usually starts on the scalp or the nappy area and quickly spreads. Although this type of eczema looks unpleasant, it is not sore or itchy and does not cause the baby to feel uncomfortable or unwell. Normally this type of eczema will clear in just a few months, though the use of moisturising creams and bath oils can help to speed this along.



Infantile seborrhoeic dermatitis

Adult seborrhoeic eczema

Characteristically affects adults between the ages of 20 to 40. It is usually seen on the scalp as mild dandruff, but can spread to the face, ears and chest. The skin becomes red, inflamed and starts to flake. The condition is believed to be caused by a yeast growth. If the condition becomes infected, treatment with an anti-fungal cream may be necessary.

Varicose eczema/ Gravitational eczema

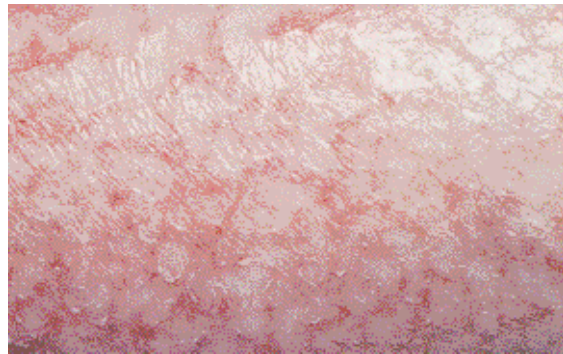
Varicose eczema affects the lower legs of those in their middle to late years, being caused by poor circulation. Commonly the skin around the ankles is affected, becoming speckled, itchy and inflamed. Treatment is with emollients and steroid creams. If left untreated, the skin can break down, resulting in an ulcer.



Varicose eczema: ankle is inflamed, itchy and speckled

Discoid eczema/Nummular eczema

Is usually found in adults and appears suddenly as a few coin shaped areas of red skin, normally on the trunk or lower legs. They become itchy and can weep fluid. Usually discoid eczema is treated with emollients (and steroid creams if necessary).



Asteatotic eczema: superficial fissuring which result in a 'crazy-paving' appearance

Asteatotic eczema

This is frequently seen in the hospitalized elderly, especially when the skin is dry; low humidity caused by central heating, overwashing and diuretics are contributing factors. It occurs most often on the the lower legs as a rippled or 'crazy paving' pattern of fine fissuring on an erythematous background.

Pompholyx/Dyshidrotic eczema/Vesicular eczema

Recurrent vesicles and bullae occur on the palms, palmar surface of the fingers and soles are excruciatingly itchy. It can be provoked by heat, stress and nickel ingestion in a nickel sensitive patient but is often idiopathic.

SYMPTOMS

What ever causes of eczema, it leads to itching and redness, and may make the skin dry and flaky. Sometimes,

Essentials of diagnosis

- Pruritic, exudative, or lichenified eruption on face, neck upper trunk, wrist, hand and in the anticubital and popliteal folds.
- Personal or family history of allergic manifestations (e.g asthma, allergic rhinitis, atopic dermatitis)
- Tendency to recur with remission from adolescence to age 20.

itchy blisters form. When these burst, or when scratching damages the skin, the surface may be left moist and crusty. ▶

Often, in the commonest form of eczema (atopic eczema), the problem is worst in the folds of the skin where limbs bend.

The itch is intense, and scratching it makes the symptoms worse. Gentle rubbing, with the flat of your hands is better than scratching. Whatever the cause of eczema, the skin becomes more sensitive.

INVESTIGATION

Patch test: These are performed in suspected cases of contact allergic dermatitis.

IgE and specific IgE: These are occasionally performed to support the diagnosis of atopic eczema and to determine specific environmental allergen e.g. pet dander, horse hair, house dust mite, pollens and food.

Prick test: This test is less commonly performed for diagnosis of atopic eczema.

Bacterial and viral swabs for microscopy and culture: These are extremely useful test to exclude secondary infection.

MANAGEMENT

There are a number of ways to manage eczema, all of which begin with an effective skin care routine. Having access to accurate information is important as this allows the person with eczema, to make informed choices when managing the condition. The following are the more commonly used treatments.

Emollients

Emollients are necessary to reduce water loss from the skin, preventing the dryness normally associated with eczema. By providing a seal or barrier, the skin is less dry, itchy and more comfortable. Emollients are safe to use as often as is necessary and are available in various forms: ointments for very dry skin, creams and lotions for mild to moderate or 'wet' eczema. Some are applied directly to the skin, whilst others are used as soap substitutes or can be added to the bath. Testing a small amount on the skin first is advisable, as emollients contain substances to which some people are sensitive.

Topical steroids

When eczema is under control only emollients need to be used. However in flare-ups, when the skin becomes

inflamed, a steroid cream may be needed. Steroids act by reducing inflammation and are used in most types of eczema. Topical steroids come in four different strengths, mild, moderately potent, potent and very potent. The strength of steroid cream that a doctor prescribes depends on the age of the patient, the severity of the condition and, the size of the area and part of the body to be treated. Topical steroids are applied thinly to the affected area. Eczema should be reviewed regularly if topical steroids are being applied. As long as steroids are used appropriately and as directed by doctor, the likelihood of side effects is very rare. Reported side-effects have been largely due to the use of very potent steroid preparations over long periods of time.

Oral steroids

Are sometimes prescribed in very severe cases and usually under the direction of a consultant dermatologist, when topical steroids have been found to be ineffective. These can have possible side-effects and the doctor should ensure close monitoring when prescribed.

OTHER TREATMENTS

Antihistamine

Antihistamine are occasionally prescribed to control itching and help the eczema sufferer sleep. Their effectiveness as anti-itch medication is limited, however, histamine are not an important component of eczema associated itching.

Antibiotics

Damaged skin is susceptible to bacterial infection. People living with eczema tend to develop more skin infections than others. Antibiotics, topical or oral, may be required to treat infection.

Phototherapy

Ultraviolet light therapy improves eczema symptoms in some people. Phototherapy may only use ultraviolet light, or may combine the use of ultraviolet light with psoralen, a drug that increase light sensitivity. While ultraviolet rays occurs naturally in sunlight, excessive sun exposure causes sunburn which can make symptom worsen.

Diet

The role of diet in the management of eczema has not been ascertained. Generally changes in diet are only considered in severe cases, when conventional treatments ►

are failing. Dietary changes can be quite helpful in babies and young children, though the effects on older children and adults are less conclusive. When considering altering the diet of a baby or child it is important to seek advice from a dietitian, or a nutritional therapist, in order to ensure that the child continues to receive adequate nutrients. Sometimes it can be useful to keep an accurate diary of foods eaten and the condition of the eczema and, when weaning babies, to do so very slowly observing for skin reactions.

MODERN TREATMENT

The latest treatment for eczema is a new class of skin medications called topical immunomodulators (TIMs). This medication are steroid free. The most common are tacrolimus and ascomycin. Studies have shown as high as an 80% success rate using this new medication.

PREVENTION

Although a number of medical treatments are available for eczema, the best defense against skin conditions is prevention. Minimizing your contact with triggers and the known and suspected causes of itching will help keep skin conditions under control. Practicing a daily regimen of skin care helps to reduce eczema symptoms.

Bathing and skin care

A long soak in a steaming hot bath is a great way to relax and unwind, but unfortunately bathing, especially bathing in hot water, dehydrates skin. Natural oils that moisturize the skin are lost when bathing. Vigorously rubbing with a towel further reduces skin's levels of natural moisturizers. Quick, lukewarm showers are better than long hot baths for skin. Using lukewarm water and bathing is more preferable for ten to twenty minutes only. Avoid using soaps: even a mild soap can dry and irritate skin. After drying the skin, moisturize with a gentle cream, ointment, or lotion.

Controlling allergen

Allergens often trigger eczema, and are one of the more common causes of itching. Almost anything can be an allergen: pet dander, dust, perfumes, soaps, rubber and antibiotics are all common allergens. Avoiding these and other suspected allergens reduces the chances of triggering skin rashes. The best strategies to minimize contact with dust mites are washing clothing and bed

linens and vacuuming on a regular basis. Pillow and mattress wraps also help reduce contact with mites.

Excessive sweating and skin rashes

Excessive sweating can aggravate eczema-especially skin rashes in the joints, under the breasts and any other body areas where the skin folds on itself. Obesity greatly increases the chances of excessive sweating and skin fold rashes, so weight loss may help reduce symptoms. Altering exercise programs to reduce sweating and wearing soft, absorbent clothing may also help.

Kids and eczema

Young children often have a hard time resisting the urge to scratch eczema rashes. Child's fingernails should be cut short to minimize damage done by scratching. For infants, using mittens often prevents them from scratching themselves, but do make sure that the mitten material itself does not trigger rashes.

Other tips

Laundry soap can leave residue on clothes that aggravates eczema. Laundry soap designed for sensitive skin should be used. Whether using a gentle laundry soap, rinse clothes thoroughly to remove any residues.

If low humidity causes skin to dry and crack, try using humidifiers in home or office. Humidifying the air in the rooms is a good strategy to prevent dry skin conditions.

PROGNOSIS

The disease runs in a chronic and intermittent. Affected adult may have only hand dermatitis. Poor prognostic factor for persistence into adulthood in atopic dermatitis include onset early in childhood, early generalized disease, and asthma. Only 40-60% of these patient have lasting remissions.

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Pruritus (itch) is a common symptom encountered by dermatologists and primary physicians. It is defined as an unpleasant sensation that provokes a desire to scratch. Scratching can be considered physiologically appropriate only when it helps to remove the noxious stimulus from the skin, such as in parasitosis. In most other circumstances, it causes a great deal of discomfort and distress to the person. Although itching is often seen as a minor social disability, it can be so severe and intractable as to completely incapacitate a person and present a diagnostic and therapeutic challenge to the physician.

CAUSES

Dermatologic conditions

- A. Dry skin or xerosis (most common cause)
- B. Atopic dermatitis
- C. Allergic contact dermatitis
- D. Bullous pemphigoid
- E. Dermatitis herpetiformis
- F. Folliculitis
- G. Psoriasis
- H. Lichen planus
- I. Mycosis fungoides
- J. Sunburn
- K. Local infection
 - 1. Scabies
 - 2. Pediculosis corporis (lice)

Systemic

- A. Iron deficiency anemia
- B. Severe chronic renal failure (uremic pruritus)
- C. Neurodermatitis or Delusions of parasitosis
- D. Polycythemia rubra vera (30-50%)
 - 1. Provoked by hot shower or bath
 - 2. Pricking type itch may persist for hours
- E. Hodgkin's lymphoma
- F. Malignant carcinoid
- G. Multiple myeloma
- H. Scleroderma
- I. Malignant carcinoid



Psoriasis: cause of pruritus

- J. Rapid weight loss (e.g. anorexia nervosa)
- K. Hyperthyroidism (4-11% long-standing Grave's disease)
- L. Urticaria
- M. Cholestasis (bile salt protease release in skin)
 - 1. Cholestasis associated pruritus
- N. Systemic infection
 - 1. HIV infection
 - 2. Filariasis



Scabies: Finding of burrows as those illustrated here

- 3. Schistosomiasis
- 4. Onchocerciasis (river blindness)
- 5. Ascariasis
- 6. Hookworm
- 7. Trichinosis
- 8. Parvovirus B19

Localized

- A. Eye
 - 1. Allergic blepharitis
 - 2. Allergic conjunctivitis
 - 3. Atopic dermatitis
 - 4. Contact dermatitis
- B. Ear
 - 1. Ear canal pruritus
- C. Scalp
 - 1. Pediculosis (head lice)
 - 2. Psoriasis
 - 3. Seborrheic dermatitis
 - 4. Allergic contact dermatitis
 - 5. Pustule
- D. Back
 - 1. Notalgia paresthetica
 - 2. Xerotic eczema ▶

3. Psoriasis
4. Folliculitis
5. Cholestasis (Butterfly rash)
- E. Arm
 1. Brachioradial pruritus
 2. Xerotic eczema
 3. Eczematous dermatitis (antecubital fossa)
- F. Hands
 1. Dyshidrotic eczema
 2. Eczematous dermatitis
 3. Contact dermatitis
 4. Scabies (interdigital web space involvement)
- G. Groin or inguinal area
 1. Pruritus vulvae
 2. Candidiasis
 3. Tinea cruris
 4. Erythrasma
 5. Contact dermatitis
 6. Extramammary Paget's disease
 7. Intertrigo
 8. Lichen Sclerosus et Atrophicus (LS&A)
 9. Pediculosis
 10. Scabies
- H. Rectum
 1. Pruritus ani
 2. Anal fissure
 3. Condylomata acuminata
 4. Pinworm
- I. Legs
 1. Xerotic eczema (shin)
 2. Neurodermatitis
 3. Stasis dermatitis
 4. Atopic dermatitis (popliteal fossa)
 5. Lichen simplex (lateral malleolus)
 6. Dermatitis herpetiformis (knee)
 7. Cutaneous T-cell lymphoma (buttocks and thighs)
- J. Feet
 1. Tinea pedis
 2. Eczematous dermatitis
 3. Contact dermatitis
 4. Scabies (interdigital web space involvement)

Exposure related pruritus

- A. Water
 1. Aquagenic pruritus
 - a. Intense distressing itch after water contact

2. Cholinergic urticaria
3. Polycythemia vera (follows warm bath)
4. Swimmer's itch
- B. Pregnancy
 1. Pruritic urticarial papules and plaques of pregnancy
 2. Prurigo of pregnancy
 3. Herpes gestationis or pemphigoid gestationis
 4. Cholestasis associated pruritus (prurigo gravidarum)
 5. Pruritic folliculitis of pregnancy
 6. Atopic dermatitis



Papulovesicles, erythema, edema, and crusting in pruritic patches on right upper arm

7. Contact dermatitis
- C. Medications
 1. Itraconazole, fluconazole, ketoconazole
 2. Niacinamide
 3. B Vitamins
 4. Aspirin
 5. Quinidine
 6. Ointments with high concentrations of inert oil
 7. Narcotics (especially via spinal administration)
 8. Hypersensitivity reaction
e.g. Rifampicin
- b. Vancomycin
- D. Allergen or irritant exposure (e.g. contact dermatitis)
 1. Heat exposure: Miliaria rubra (Prickly heat)
 2. Cat exposure
 3. Fiberglass exposure (Fiberglass dermatitis) ▶

Age-related Pruritus

- A. Children
 1. Atopic dermatitis
 2. Contact dermatitis
 3. Lice
 4. Scabies
 5. Parvovirus
 6. Pinworms
- B. Elderly
 1. Xerotic eczema
 2. Contact dermatitis
 3. Bullous pemphigoid
 4. Herpes zoster
 5. Mycosis fungoides



Upper back and posterior neck of 65-year-old man with pruritus, showing discrete linear ulcers and hypopigmented scars.

DIAGNOSIS

History (Including signs and symptoms):

A detailed history is the single most important step towards diagnosing the cause of itching. There are a number of historical axioms; exceptions occasionally exist.

Onset

Inflammatory skin conditions usually have an acute onset, whereas underlying systemic disorders are usually associated with chronic (weeks to months), progressive pruritus.

Extent (Generalized vs Localized)

Systemic diseases usually present with generalized pruritus. However, remember the possibility of systemic disease in patients with localized itching; diabetics may occasionally present with intractable localized pruritus of the scalp.

Severity

Although the perception of itching severity varies from person to person, itching that awakens someone from sleep is less likely to be psychogenic.

Quality

Patients with dermatitis herpetiformis may describe their itching as burning in quality, whereas it is often a pricking sensation in aquagenic pruritus and polycythemia.

Diurnal and seasonal variation

Most patients with itching, but especially those with scabies, are worse in the evening when relaxing or later at night due to the warmth of the bed. Pruritus due to xerosis and atopic eczema is often worse in the winter due to low relative humidity and increased transepidermal water loss.

Bathing

In addition to itching in polycythemia vera and aquagenic pruritus that occurs after bathing, frequent hot baths and excessive use of soap aggravate pruritus by causing dry skin.

Other aggravating factors

Exercise, clothing contact (touch), skin cooling, air and topical preparations may aggravate itching.

Occupation and hobbies

Exposure to chemicals at work or home may cause irritant or allergic contact dermatitis and should be suspected, especially if there is a temporal relation.

Medication history

A detailed inquiry of prescription, over-the-counter (including herbals), topical, office sample, and recreational drugs is important, especially in undiagnosed cases of itching. Selected drugs associated with itching include those causing cholestasis (eg, chlorpropamide, phenothiazines, erythromycin estolate, oral contraceptives, captopril, and trimethoprim-sulfamethoxazole), antimalarials, opiates, salicylates and quinidine.

Medication allergy

It is important to look for drugs that are chemically related to the patient's list of drug allergies. An example involving systemic drugs includes administration of sulfonamide-based diuretics in patients with sulfonamide antibiotic allergy. Topical allergies preclude systemic administration of chemically related drugs. Examples include avoiding systemic doxepin and aminophylline in those with topical doxepin and ethylenediamine allergies, respectively.

Other history

To inquire about personal or family history of atopy (childhood eczema, allergic rhinitis and asthma), household and other contacts, pets, travel and sexual history (HIV disease). ►

Dermographism and physical urticaria

These disorders are associated with itching including diminutive variants that may cause itching without a rash.

Duration

Itching lasting for greater than 3 weeks without an identifiable cause is pruritus of undetermined origin (PUO). PUO and those patients with non-specific rashes present the greatest diagnostic challenges.

Review of systems

A complete detailed inquiry is especially important in PUO, including general health (fever, chills, weight loss); skin (pigmentation, sweating, asteatosis, plethora, and jaundice); hair (growth, texture, loss); nails (Beau's lines, onycholysis, color changes); eyes (exophthalmos, color changes); and endocrine, hematopoietic, gastrointestinal, genitourinary, neurologic and mental status.¹³ In one follow-up study 4(9%) of 44 patients with generalized pruritus were found to have systemic disease.¹³

PHYSICAL EXAMINATION

(Including cutaneous and other signs):

The skin should be examined thoroughly for evidence of any recognizable disorder. Scratching (causing excoriations) or rubbing (producing papules, nodules, and lichenified plaques) may lead to secondary changes that should not be interpreted as a primary skin disorder but may mimic them. Examination of the upper midback may help in this distinction, as it is relatively inaccessible to the hands and unavailable for scratching. One should look for evidence of parasitic infestation, especially scabies and lice. Examination of the skin, hair and genitalia with surveillance scrapings may identify either disorder. Direct, reflected light may identify nits of pubic and head lice. Examination of clothing seams may identify body lice in the unkempt (vagabond's disease). Other cutaneous signs should be evaluated. A complete physical examination is essential, including pelvic and rectal examinations. Enlargement of the lymph nodes, liver and spleen are important to identify.

INVESTIGATIONS:

A preliminary panel of laboratory investigations has been suggested for patients with generalized pruritus (pruritus of unknown origin; PUO) and nonlocalizing illness clinically.¹⁴

Other laboratory and imaging studies and endoscopy are performed when localizing signs are present. Histopathological examination of the skin lesions may be required to establish or substantiate the clinical diagnosis. In pruritus without a rash, a biopsy specimen for direct immunofluorescence from normal-appearing skin may show immune deposits in early cases of pemphigoid.

Patients with PUO should be followed with periodic reevaluation for as long as the symptoms persist, since an underlying disorder may manifest later.

Laboratory investigation for generalized pruritus

Initial screening	Further evaluation In selected cases
<ul style="list-style-type: none"> Complete blood count and peripheral smear Liver function tests (alkaline phosphatase, serum bilirubin) Thyroid function tests (T4, TSH) Chest x-ray Stool exam for occult blood Renal function tests (BUN, creatinine) Urinalysis 	<ul style="list-style-type: none"> Stool exam for ova and parasites Serum iron and ferritin Serum protein electrophoresis, serum immunoelectrophoresis Urine for 5HIAA Urine for mast cell metabolites HIV testing Skin biopsy with special stains (to exclude mastocytosis) Skin biopsy with direct immunofluorescence (to exclude dermatitis herpetiformis and bullous pemphigoid) Other radiological studies and endoscopy performed judiciously.
Reference ^{13, 14} .	

THERAPY

Identifying and treating the underlying cause is the most effective therapy for pruritus. Symptomatic treatment should be prescribed while the primary condition is being treated and in cases of PUO. Although difficult to implement in patients with atopic dermatitis, the importance of breaking the itch-scratch cycle should be clearly explained as scratching leads to more itching. Cool compresses and cool baths may help relieve the itch. Warmth aggravates itch, so a cool environment at home and workplace helps. Light clothing, light bedclothes and a cool shower before bedtime keep the person ▶

comfortable at night. Cooling lotions with calamine, pramoxine, or menthol and camphor are helpful. Pinching or gently massaging the affected area may help temporarily.

Treatments of pruritus			
Topical	Systemic	Phototherapy	Miscellaneous
<ul style="list-style-type: none"> ● Cooling agents ● Emollients ● Topical corticosteroids ● Anesthetics 	<ul style="list-style-type: none"> ● H₁ antihistamines ● Systemic corticosteroids ● Opioid receptor antagonist 	<ul style="list-style-type: none"> ● UVB 	<ul style="list-style-type: none"> ● Transcutaneous electrical nerve stimulation (TENS) ● Capsaicin
Reference ¹⁵ .			


Pruritus due to dry skin, especially in the elderly, responds to emollients such as petrolatum. Patients should avoid frequent and hot baths and excessive use of soap, which further dries the skin. Topical corticosteroids should not be prescribed indiscriminately, but used only when there are signs of cutaneous inflammation. Topical tacrolimus can be prescribed in patients with atopic dermatitis. Topical capsaicin may be useful in chronic localized pruritus such as notalgia paresthetica.

H₁-receptor antihistamines are the drugs of choice for urticaria. The newer nonsedating antihistamines are less effective in atopic dermatitis; the older sedating antihistamines may work better. Tricyclic antidepressants such as doxepin have antihistamine activity in addition to central effects and are useful in chronic, severe pruritic states. Ultraviolet B phototherapy is very effective in uremic pruritus and may be helpful in other forms of pruritus associated with prurigo nodularis, atopic dermatitis, HIV disease and aquagenic pruritus. Opioid receptor antagonists like naloxone have occasionally been used for intractable pruritus of renal and cholestatic diseases. Other measures that have been tried for chronic pruritus i.e. transcutaneous electrical nerve stimulation (TENS).

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Urticaria refers to a group of disorders in which whealing occurs in the skin. The release of chemicals such as histamine causes small blood vessels to leak and results in tissue swelling. The wheals can be a few millimetres or several centimeters in diameter, coloured white or red, often surrounded by a red flare, and frequently itchy. Each wheal may last for a few minutes or several hours, and may change shape. Wheals may be round or form ring, a map-like pattern or a giant patches. The surface wheals may be accompanied by deeper swelling of eyelid, lips, hands and elsewhere. The swelling is called angioedema. Angioedema may occur with or without urticarial wheals.

PATHOPHYSIOLOGY

Release of histamine and other compounds by mast cells and basophils causes the appearance of urticaria. Mast cell activation causes degranulation of intracellular vesicles that contain histamine, leukotriene C₄, prostaglandin D₂, and other chemotactic mediators that recruit eosinophils and neutrophils into the dermis. Histamine and chemokine release lead to extravasation of fluid into the dermis (edema). Histamine effects account for many of the clinical and histologic findings of urticaria. The exact mechanism of action resulting in the release of the intracellular contents of mast cells and basophils is varied and can occur through immune-mediated or nonimmune mediated mechanisms.

Immune-mediated urticaria

Immune-mediated urticaria can be caused by immune mechanisms.

1. Type I allergic IgE response is initiated by antigen-mediated IgE immune complexes that bind and crosslink Fc receptors on the surface of mast cells and basophils.
2. Type II responses are mediated by cytotoxic T cells. The disease process activates by products that cause urticarial vasculitis or bullous pemphigoid.
3. Type III immune-complex disease is associated with systemic lupus erythematosus (SLE) and other connective tissue disorders that activate urticaria.

Nonimmune-mediated urticaria

Chemicals that can directly induce mast cell degranulation, presumably by altering the membrane properties, cause nonimmune-mediated urticaria eg.

opiates, antibiotics, curare, radiocontrast media, azo dyes, aspirin, and aspirin derivatives.

Common causes of urticaria

Drugs	salicylates, penicillin, ACE inhibitors, NSAID, allopurinol and many others.
Foods	fish, nuts, egg, strawberries, milk, cheese, wine and many others.
Food additives	azo dyes, benzoates, sulphites and yeast.
Infections	hepatitis B, infectious mononucleosis, candidosis and focal sepsis.
Inhalants	grass pollens, moulds, housedust mites, etc.
Infestation	enterobius, filariasis, ascariasis.
Immune complex	transfusion reaction, drugs

CLASSIFICATION OF URTICARIA

Various types of classifications exist, the following classification adopts a more practical approach.

Acute urticaria

The cause of the acute attack is often obvious and there may be a history of similar attack. Initial investigations should include the differential white cell count and ESR measurement. The presence of eosinophilia points to parasitic infestation. Other possible causative factors listed above should be sought for.

Most of these acute episodes can be successfully controlled with antihistamine. In acute urticaria of serum sickness type hypersensitivity, a short course of systemic steroid may be necessary.

Chronic idiopathic urticaria

Chronic idiopathic urticaria is defined as urticaria lasting longer than 6 weeks, for which no obvious cause can be found. This is the commonest type of urticaria. No obvious aetiological factor is apparent and special investigations are nearly always unhelpful. For most patients with chronic idiopathic urticaria, a complete blood count, ESR for screening may be adequate. Stool for ova is indicated if there is eosinophilia.

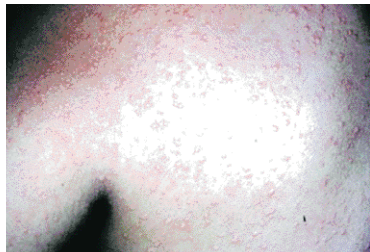
Although no underlying cause can be found a sedating or non sedating antihistamine can be prescribed.

Cholinergic urticaria

A common condition in young adults with intensely itchy and short-lived eruption developing in response to sweating, exercise, emotion and hot foods. It is postulated that an increase in blood temperature triggers a neural ►

reflex which releases acetylcholine from sympathetic nerve endings, in turn activate the mast cell to degranulate.

Diagnosis is established from the history and the finding of characteristic rash during an attack. Treatment is unsatisfactory.



Typical lesion of cholinergic urticaria

Patients, especially those with associated systemic symptoms, should be told to avoid situations that can precipitate an attack. Some patients improve with antihistamine therapy.

Pressure urticaria

This rather rare condition is not a true urticaria. Delayed cutaneous erythema and oedema and subcutaneous oedema occur in response to the sustained application of pressure to the skin.

The lesions characteristically occur after certain activities: sitting on hard chairs, carrying bags, leaning against furniture, wearing seat belts and lying on hard mattresses.

Histamine is probably not an important mediator of this disease and treatment with antihistamine is useless. Other forms of treatment including the use of NSAIDs and colchicine. Systemic steroid is an effective agent but is limited by its side effects.

Symptomatic dermographism

Dermographism means whealing after direct pressure on the skin. The patient notices that the skin itches with linear wheals appearing after scratching. The itching and whealing reach their maximum in 5-10 minutes after the stimulus and disappear 30-60 minutes later. Lesions frequently appear in areas where clothing is tight and at sites of scratching.

Solar urticaria

Solar urticaria is a rare photodermatosis of unknown aetiology. Patients notice erythema, burning, and urticarial wheals within minutes following exposure to sunlight or other visible light source. Wheals can develop anywhere on the body, mostly in the sun exposed skin. The diagnosis can be confirmed by phototesting with monochromator on areas of the body that are normally

covered e.g. the buttock. Avoidance of sunlight is essential in the management. Antihistamines can produce symptomatic relief.

Cold urticaria

Patients with cold urticaria develop whealing on exposure to cold. Wheals typically appears on exposed areas on a cold day. Handling of cold objects also causes immediate local reaction. There may be swelling of the mouth and oesophagus after drinking cold water. If whealing is extensive, cold urticaria may be associated with systemic symptoms like faintness, wheezing and palpitations.



Cold urticaria

Diagnosis is established by placing an ice cube (wrapped in plastic bag) on the skin for 30 seconds to 10 minutes.

Antihistamine treatment is partially effective in suppressing symptoms. Cyproheptadine is generally considered to be the drug of choice. Salbutamol and aminophylline can relieve the pruritus of cold urticaria.

Aquagenic urticaria

This is a rare type of physical urticaria in which brief contact of the skin with water of any temperature causes an immediate urticarial eruption at the site of contact, the morphology of which closely resembles that of cholinergic urticaria. Complete blood count should be checked as this condition may be symptomatic of polycythemia rubra vera. Both disorders involve histamine release from skin mast cells and respond well to antihistamine.

Vibratory angioedema

Vibratory angioedema is an acute short-lived itchy swelling of the skin that occurs within minutes of application of a vibratory stimulus to the skin. This condition is rare and is probably genetically transmitted. Clapping and riding a motor bike may also produce lesions. Treatment with antihistamine is usually effective.

Angioedema

This is a variant of urticaria where massive oedema involves subcutaneous tissues rather than the dermis. It may involve any part of the body surface like the lips, eyelids, tongue and larynx. This condition can be associated with urticaria of any cause. ►

Hereditary angioedema

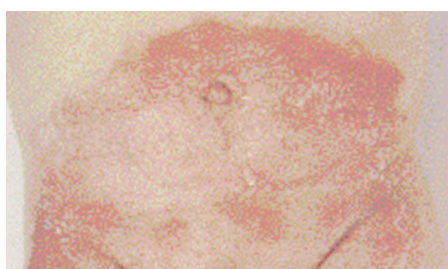
In hereditary angioedema attacks are infrequent in childhood, common in adolescence and early adult life and may subside later. It is precipitated by trauma and the lesions may affect the skin, mucosal surface and intestine. Subcutaneous swelling is not itchy and typically persisted for a few days. Intestinal oedema may cause symptoms simulating acute abdomen. Laryngeal oedema may lead to upper airway obstruction and death. In acute airway obstruction, subcutaneous adrenaline may be life saving. Fresh frozen plasma should be administered by intravenous infusion.



Angioedema

Contact urticarias

Contact urticaria is a local immediate or delayed erythema or urticarial reaction at the site of epidermal or



Contact urticaria

mucosal contact with a causative agent. It may be associated with generalized cutaneous reactions, rhinitis, asthma, or anaphylaxis. It is commonly an IgE mediated immediate reaction and non immunological mechanism is also possible.

Probably the most important cause of contact urticaria is natural rubber latex present in gloves and other rubber products.

Urticarial pigmentosa

This condition is in fact not urticaria but is a disorder of mast cell proliferation commonly seen in early childhood. Clinically there is multiple guttate or larger pigmented macules on the trunk and limbs of the baby and urticated lesion may appear on rubbing the pigmented lesions. The biopsy of the skin shows increase in the number of mast cells.

Urticarial vasculitis

Urticarial vasculitis is an eruption of erythematous wheals that clinically resembles urticaria but is a form of leukocytoclastic vasculitis. Urticarial vasculitis is a Type III hypersensitivity reaction in which antigen-antibody complexes are deposited in the vascular lumina. This reaction results in complement activation and chemotaxis of neutrophils. These cells release various proteolytic enzymes, such as collagenase and elastase, resulting in damage to the vascular lumina.

CLINICAL FEATURES

The lesions in urticaria are usually not difficult to recognize. They are intensely itchy, with a white palpable centre of oedema and a variable halo of erythema. The size and shape can be highly variable and individual lesion usually lasts for several hours, except in urticarial vasculitis and angio-oedema where the lesion may persist longer.

The history is very important for the diagnosis of different types of urticaria in particular for physical urticarias. The frequency, duration, severity, and timing of the attacks may give clues to the diagnosis and are essential for subsequent management. A thorough food and drug history should be evaluated.

INVESTIGATION

In most patients suffering from urticaria, the correct diagnosis can be made after history taking and physical examination. A complete blood count together with ESR is adequate for the majority who has no other abnormal physical finding.

Tests for physical urticaria

Cholinergic Urticaria	exercise test, whole body warming
Dermographism	light stroke on the skin, dermatographometer
Cold urticaria	ice cube test
Solar urticaria	phototesting
Aquagenic	water at 25°C compresses

Other investigations should be done when necessary.

- ◆ Complete blood count and ESR: look for eosinophilia
- ◆ Liver function test
- ◆ Complement C₃ and C₄ (Urticarial vasculitis)
- ◆ C₁ esterase inhibitor level (Hereditary angioedema) ►

- ◆ Investigating underlying infections: chest radiograph, urine for culture, stool for ova, throat swab, HbsAg, viral study etc.
- ◆ ANF, RF in suspected connective tissue disease
- ◆ Skin biopsy: urticarial vasculitis, urticaria pigmentosa
- ◆ Skin prick test: useful for contact urticaria. Difficult to interpret for chronic idiopathic urticaria.

THERAPEUTIC MODALITIES FOR URTICARIA

Antihistamines

This group of medicine has H₁ receptor blockers action and is the mainstay of therapy for urticarias. There are many antihistamines available. While the classical ones have been used for many years and are effective and cheap, they have more anticholinergic action and can cause more sedation. The newer antihistamines are more expensive and less sedating.

The classical antihistamines can be grouped into 6 classes according to their chemical structures.

Commonly used 'Classical' antihistamines

Class	Generic name	Usual adult dose
Ethanolamines	Dimenhydrinate	50-100 mg qid
	Diphenhydramine	25-50 mg qid
Alkylamines	Chlorpheniramine	4 mg tid
	Dexrochlorpheniramine	75 mg bid
	Pheniramine	2-4 mg tid
Phenidenes	Mebhydrolin	50-100 mg tid
Phenothiazines	Promethazine	10-25 mg bid
	Trimeprazine	10-30 mg qid
	Mequitazine	5 mg bd
Piperazines	Hydroxyzine	10-25 mg tid
Piperidines	Cyproheptadine	4 mg tid
	Azatadine	1-2 mg tid

All antihistamines are not proven safe in pregnancy and one should balance the risk and the possible benefit before prescribing antihistamines to pregnant woman. Newer antihistamines should always be avoided.

Low sedating antihistamines

Usual adult dosage	Onset	Duration of action
Astemazole 10 mg daily	days	4 weeks
Loratadine 10 mg daily	1-2 hours	24 hours
Cetirizine 10 mg daily	1-2 hours	24 hours
Acrivastine 8 mg tid	30 minutes	12 hours

Other antihistamines and related drugs

Ketotifen : Antihistamine-like drug with mast cell stabilising effect. Adult dosage: 1-2 mg bd

Oxatamide : Properties comparable to ketotifen, dosage is 30 mg bd.

Doxepin : A tricyclic antidepressant with antihistamine activity. Suitable for administration at night. There is drug interaction with MAOIs, and can cause cardiac arrhythmia. Dosage: 10 mg nocte.

Beta-stimulants

This is considered as a second line treatment for patients with resistant chronic urticaria and antihistamine tolerance. They act directly on the mast cell and prevent degranulation. Although they are effective, their use is limited by their side effects, including tremors and tachycardia.

Salbutamol: 2-4 mg tid; Terbutalin: 0.5 mg tid

Calcium channel blocker

Only nifedipine is useful for stubborn urticaria. It acts by stabilizing mast cell and inhibit degranulation. Side effects include hypotension and flushing attacks.

Nifedipine: 5-10 mg tid

Anabolic steroid

This has been used in patients suffering from hereditary angioedema. It is also used in cholinergic urticaria.

Danazol: 100-600 mg daily

Stanozolol: 2.5-10 mg daily

Systemic corticosteroid therapy

This is an effective form of therapy for urticaria but long term therapy should be used only in exceptional cases because of its side effects.

Mast cell-stabilising agents

Disodium cromoglycate which stabilized mast cell membrane has been found to be useful in atopic asthma when administered via an inhaler. Because the drug is not absorbed in the gastrointestinal tract they are generally not effective for patients with chronic urticaria. However, it may be helpful in cases of urticaria caused by food allergy.

References:

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Oni®

Betamethasone Dipropionate BP & Clotrimazole BP

COMPOSITION

Oni cream: Each gram cream contains 0.50 mg Betamethasone (as Dipropionate) and 10 mg clotrimazole.

PHARMACOLOGY

Clotrimazole is a broad-spectrum, antifungal agent used for the treatment of superficial infections caused by species of pathogenic dermatophytes, yeasts and *Malassezia furfur*. The mechanism of action involves inhibition of the synthesis of ergosterol, a major sterol in the fungal cell membrane. This leads to instability of the cell membrane and eventual death of the fungus.

Betamethasone dipropionate is a corticosteroid with anti-inflammatory, antipruritic, and vasoconstrictive properties. But the exact mechanism of action of corticosteroids is uncertain.

INDICATION

Oni cream is indicated for the topical treatment of inflammatory dermal infections like tinea pedis, tinea cruris, tinea corporis, etc.

DOSAGE AND ADMINISTRATION

Sufficient cream should be massaged onto the affected and surrounding skin areas twice a day, in the morning and evening, for 2 weeks in tinea cruris and tinea corporis and for 4 weeks in tinea pedis. The use of cream for longer than four weeks is not recommended.

CONTRAINDICATION AND PRECAUTION

The preparation is contraindicated in those patients who are sensitive to any of its components or to other corticosteroids or to imidazoles.

If irritation or sensitization develop with the use of the cream, treatment should be discontinued and appropriate therapy instituted.

The cream is contraindicated in facial rosacea, acne vulgaris, perioral dermatitis, perianal and genital pruritus, napkin eruptions and bacterial or viral infections.

Systemic absorption of topical corticosteroids can produce reversible hypothalamic-pituitary-adrenal (HPA) axis suppression. If HPA axis suppression is noted, an

attempt should be made to withdraw the drug or to reduce the frequency of application.

Pediatric patients may be more susceptible to systemic toxicity from equivalent doses due to their large skin surface to body mass ratios.

SIDE EFFECT

Adverse reactions reported for the preparation in clinical trials were paresthesia in 1.9% of patients, and rash, edema and secondary infection, each in less than 1% of patients.

Other adverse reactions reported with the preparation were burning and dry skin in 1.6% of patients and stinging in less than 1% of patients.

OVERDOSE

Acute overdose with the cream is unlikely and would not be expected to lead to a life-threatening situation. The cream should not be used for longer than the prescribed time period.

DRUG INTERACTION

No information is available.

PREGNANCY AND LACTATION

There is inadequate evidence of safety in pregnancy. Clotrimazole has no teratogenic effect in animals, but is foetotoxic at high oral doses. Topical administration of corticosteroids to pregnant animals can cause abnormalities of fetal development. Hence the cream should only be used in pregnancy, if the benefit justifies the potential risk to the fetus and such use should not be extensive, i.e. in large amounts or for long periods.

It is not known whether the components of the preparation are excreted in human milk and therefore caution should be exercised when treating nursing mothers.

USE IN CHILDREN

The safety and effectiveness of the preparation has not been established in children below the age of 12 years.

PHARMACEUTICAL PRECAUTION

Store at a cool and dry place. Protect from light. Do not freeze.

HOW SUPPLIED

Oni cream: Each pack has a tube containing 10gm of the cream.

the SQUARE



Scientific seminar on "Osteoporosis" at MMCH, Mymensingh



Glimpse of "SQUARE factory (Dhaka Unit) visit program"



Scientific seminar on "Osteoarthritis" of orthopedic department
SBMCH, Barisal



4th scientific seminar on "Management of Labour" organized
by OGSB, Chittagong branch at Hotel Agrabad



Scientific seminar on "Acute Abdomen & Obstructive Labour"
at sadar hospital, Magura



Scientific seminar of RMCH, Rajshahi

Correct answers of the 'Test Yourself - 10'

1. a & d 2. a,b,c & e 3. d 4. a,c,d & e 5. a & b 6. b & e

The following are the 10 winners of the "Test Yourself -10"; they have been selected through lottery.

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Rajshahi

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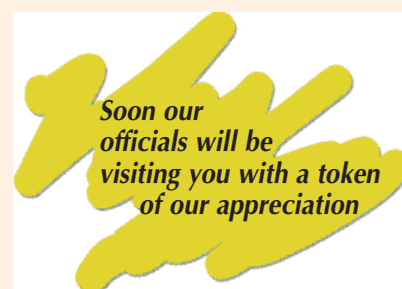
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Test Yourself

11

1. All the following are true for pruritus except:

- Psoriasis is a systemic cause of pruritus.
- Cutaneous T-cell lymphoma may cause pruritus.
- Medication history is important to treat pruritus.
- Complete blood count, liver function tests, serum iron and ferritin are the initial screening tests for pruritus.

2. All the information regarding Oni® (Betamethasone Dipropionate BP & Clotrimazole BP) are true except:

- It is indicated for inflammatory dermal infections like Tinea pedis, Tinea cruris, Tinea corporis etc.
- The cream should be massaged on the affected areas twice a day in morning and evening for 2-4 weeks.
- It can be used in children below twelve years.
- The cream is also indicated in acne vulgaris, perioral dermatitis.

3. All the following are correct for the treatment of pruritus except:

- The itch-scratch cycle breaking is very important.
- Topical corticosteroid should be used continuously.
- H₁ - receptor antihistamines are the drug of choice for urticaria.
- Tricyclic antidepressants are useful in chronic severe pruritic conditions.

4. Pick the correct answers of the following:

- Adult seborrheic eczema seen on the scalp and does not spread to other areas of the body.
- Patch test, prick test, IgE tests are performed to diagnose eczema.
- Emollients, topical steroids, oral steroids are usually prescribed to treat eczema.
- New topical immunomodulators have shown about 80% success in treating eczema.

5. All the following are true except:

- Angioedema involve the dermis only.
- Cholinergic urticaria is common in young adult.
- Urticarial vasculitis is a Type III hypersensitivity reaction.
- Alkylamines and phenothiazines are "classical" antihistamines.

6. All the following are correct except:

- Dandruff is a type of scaly dermatoses.
- Psoriasis does not usually have a positive family history.
- Hair loss is not common in Tinea capitis infection.
- Tinea versicolor is usually seen on the upper arms.



His Majesty King Gyanendra Bir Bikram Shah Dev visited the stall of SQUARE Pharmaceuticals Ltd. at the recently concluded 4th SAARC Trade Fair at Kathmandu, Nepal



His Excellency Mr. Lyonpo Khandu Wangchuk, Minister, Ministry of Trade and Industry of Bhutan and Mr. Suhel Ahmed Choudhury, Commerce Secretary, Bangladesh visited the stall of SQUARE Pharmaceuticals Ltd. at the recently concluded single country trade fair of Bangladesh at Thimphu, Bhutan



The Chairman and General Secretary of organizing committee of SIMON Annual Conference 2002 are seen with Mr. Raju Karmacharya, Managing Director of M/s Meditron International (SQUARE's exclusive marketing partner in Nepal) and his colleague



The Founder and Ex-Chairman of SIMON is seen with Mr. Raju Karmacharya, Managing Director of M/s Meditron International (SQUARE's exclusive marketing partner in Nepal) during SIMON Annual Conference 2002



Glimpses of participants in the Clinical Symposia in Mandalay and Yangon organized by Thit Gabar Company Ltd. (SQUARE's exclusive marketing partner in Myanmar)



NON-INVASIVE GLUCOSE TEST

Monitoring blood sugar levels is the foundation of care for diabetes. It requires multiple blood samples to be taken throughout the days by puncturing the finger. Many patients do not comply because of inconvenience or discomfort. Doctors say a noninvasive method for testing would significantly increase the compliance of patients and in turn improve the management of disease. Researchers study the use of noninvasive test using optical coherence technology (OCT). Optical coherence technology (OCT) uses advanced photonics and fiber optics to obtain images of tissues. It uses infrared light waves that reflect off the internal structures within the tissue to send back a picture and information about the tissue, including blood sugar levels. The major advantages of OCT approach over previous attempts are the high quality resolution of the images and the accuracy.

Source: *Diabetes care*, 2002; 25:2263-2267

BREASTFEEDING REDUCES BABY PAIN

Breast-feeding during a painful medical procedure may reduce a newborn's response to pain. Researchers identified 180 healthy newborns that were undergoing venepuncture. Newborns were either breast fed, held in their mother's arm without breastfeeding, given 1 ml of sterile water as a placebo or given 1 ml of glucose solution followed by a pacifiers during the procedure. Study showed 16 out of 44 newborns in the breastfeeding group showed no indication that the venepuncture and blood sampling had been occurred. Researcher observed no reduction in pain response in newborns that were held in their mother's arm. Researchers say this may be because these newborns were dressed and did not have skin to skin contact with their mothers.



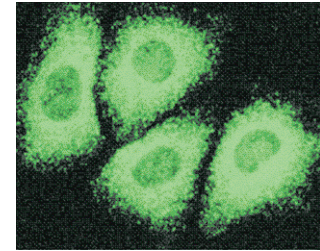
Breastfeeding baby feels less pain

Source: *British Medical Journal*, 2003; 326:13-15

SILENT BUT DANGEROUS

People with hepatitis C who show no signs of disease may not be entirely in the clear. A new study shows 40 percent people with symptom free disease still have active disease

that can destroy liver. Some people with hepatitis C become very sick, others remain healthy and have no symptoms. More than 4800 healthy people took part in the study. Researchers tested the blood of the participants for hepatitis C infection. In those who tested positive, another test was used to measure a substance in the blood that increases in the people with liver disease. In some of the participants, a liver biopsy was also performed. Researchers report 85 of the employees tested positive for the virus. Of those, about half also tested positive for the substance that indicates liver damage. 20% of those who were biopsied had abnormality in their liver. The study showed older people with hepatitis C are more likely to have liver damage. The study also showed people with hepatitis C virus infections but no symptoms can have liver damage. Researchers conclude the severity of the liver damage is connected with an increase in age and the presence of the substances that indicates liver damage.



Immunofluorescence staining of subgenomic hepatitis C virus replicon

Sources: *Annals of Internal Medicine*, 2002, 137; 961-964

GENE VARIATION MAY PROTECT AGAINST MALARIA

Scientists have identified a gene variation that may protect against severe malaria in a region of the world where the potentially deadly disease is endemic. The protective variation is in the glyco-phorin C gene, which codes for a receptor on red blood cell. In the new study, scientists found that this receptor binds to a protein on one type of malaria parasite – *Plasmodium falciparum*– which clears a path for parasite to invade the cells. Once inside a person's red blood cells, malaria parasite grow and multiply. But the glyco-phorin C variant, in which a particular piece of gene's DNA is deleted, does not allow the blood cell receptor to bind to the parasite. This denies the pathogen one of its "invasive pathways". People with the gene variants– who are considered "Gerbich-negative"- might have lower rates of parasitic invasion into their red blood cell, which could significantly reduce the severity of diseases.

Sources: *Nature Medicine* 2002;10. 1038

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The best option for moderate eczema

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