



Dermatosis or Skin Diseases

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After studying this topic, the students will be able to

- ☐ Identify the signs and symptoms of dermatosis.
- ☐ Determine the appropriate treatment and care for patients with signs and symptoms of dermatosis.



Scope of the topic

- Definition of dermatosis
- Causes of dermatosis
- Dermatosis caused by bacterial, fungal, and viral infections
- Dermatosis infections caused by allergies

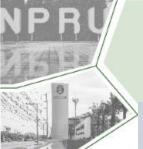
What is the definition of dermatosis (skin disease)?



Skin disease is an inflammatory disease involving the sebaceous glands of the skin; characterized by papules or pustules or comedones.

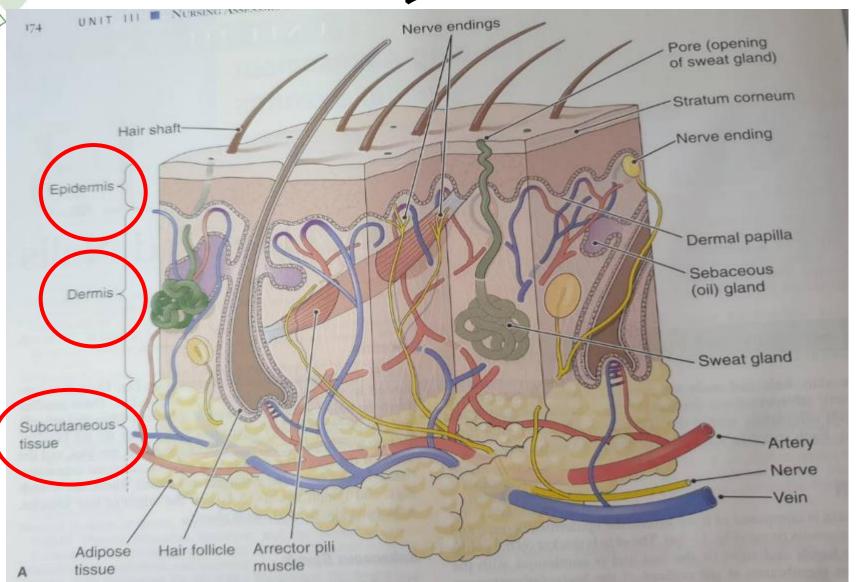
Dermatosis, disorder involving lesions or eruptions of the skin.

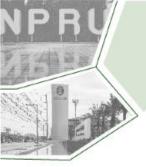
Cause: occurred in both the epidermis (epidermis) and dermis



SKIN LAYERS

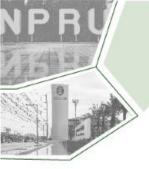








- Hormonal disorders Blockage or inflammation of the pores, including acne.
- The use of drugs, cosmetics, radiation and sunlight, such as freckles and Melasma.
- Bacterial infections, including (abscess), cellulitis and impetigo
- Skin diseases caused by viral infections, such as AIDS, herpes, chicken pox, rubella and warts.

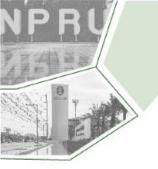




Dermatosis caused by fungal infections

- Eczema
- Ringworm
- Foot bite disease or Hong Kong feet
- Dandruff or scalp fungus
- Nail fungus



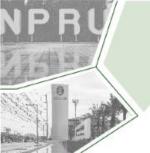




Skin diseases caused by allergies

- Pollens
- Fur
- Food
- Drugs

Skin diseases caused by malnutrition including lack of vitamin B_3 .





- Dermatosis caused by genes or disorders during pregnancy including moles, birthmarks.
- Dermatosis caused by skin disorders or caused by many reasons, such as corns psoriasis
- Dermatosis caused by metabolic diseases such as DM, hypothyroid (myxedema, thyroid gland works abnormally little.)

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DERMATOSIS SYMPTOMS



- The intensity depends on the type and the causes of the disease
- Skin lesions include rash, cysts, pus-filled sacs, blisters, swelling, discolorations, bumps, hardening, or any other change in or on your skin
- Some skin diseases occur in the dermis that causes bleeding. In which the skin is prone to stinging, itching and pain at the areas of redness, blisters, or sores.

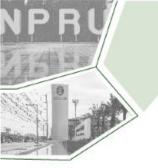




Dermatosis infections caused by

- Bacteria
- Fungus
- Virus







Dermatosis caused by bacterial infections

- 1. Abscess
- 2. Blister (Impetigo, Eczema)
- 3. Dermatitis (Cellulitis)
- 4. Erysipelas

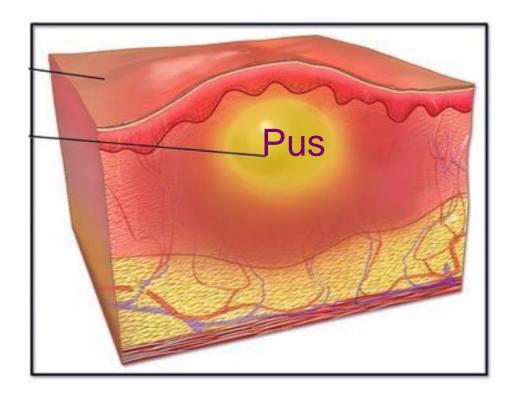




1. Abscess

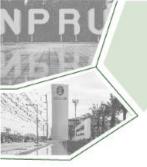






Picture available from https://medthai.com/%E0%B8%9D%E0%B8%B5/





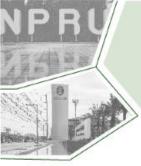
1. Abscess



- Inflammation of the sebaceous glands and hairs commonly found in people of all ages.
- People with diabetes or frequent steroid use may experience frequent occurrence of abscesses.
- Most often have only one head, some people may have multiple heads in succession called Carbuncles.

Cause

- Caused by the bacterium Staphylococcus (Staphylococcus) or may be by direct contact with infected patients.



Abscess symptoms



- •A nodule or swelling, redness, pain, hair, or hair in the middle of the lesion.
- •If abscess located nearby lymph nodes may be swollen and painful.
- •In the case of carbuncle, fever, and fatigue may be accompanied.
- •In the case of a single abscess, a scar is a common symptom when healed.

Abscess treatment



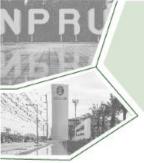
- 1. Warm compress by applying 2-3 times a day for 10-15 minutes each time.
- 2. Provide pain relievers to reduce fever
- 3. Give antibiotics 5-7 days such as
 - : Cloxacillin 250-500 mg 1x4 per oral pc
 - : Erythromycin 500 mg 1x4 per oral ac
- 4. Incision and drain if needed.



Suggestions



- 1. If the abscess is frequent, it may indicate low immunity, nutrient deficiency, anemia, diabetes, or long term use of steroids → find out the cause and provide care of the underlying disease.
- 2. Should prevent the occurrence of the abscess by bathing or washing the body with a soap 2 times a day.
- 3. Do not squeeze the abscess, especially if it rises in the center of its face.



2. Blister (Impetigo, Eczema)







Picture available from

http://www.atlasdermatologico.com.br/disease.jsf?diseaseId=203



Symptoms



- Firstly, it will look like a red rash and itching, later, the blisters become clear, easily broken, becomes red with sticky, greasy lymph attached to it like a cigarette when the first rash broke. Often with a rash appearing in many nearby areas.
- Low fever or enlarged lymph nodes
- It usually occurs on the face, ears, nose, mouth, head, buttocks, and the extremities of the limbs (such as hands, legs, knees).
- •It may be a complication of other skin diseases such as scabies, chickenpox, herpes zoster/simplex, a rash, allergic rash, etc.

Complications and treatment



• Complications - Sepsis

- Group A streptococcus may cause nephritis.

Treatment

- 1. Shower with soap 2 times a day and use potassium permanganate to wash away the flakes.
- 2. If itchiness is observed, give antihistamines such as
 - Chlorpheniramine: C.P.M. 1x3, 1x2, oral pc or 1xhs





- Apply the wound with tetracycline ointments or gentamicin cream or gentian violet after every shower.
- 4. Prescribe antibiotics such as
 - : Cloxacillin 250-500 mg 1x4 per oral pc
 - : Erythromycin 500 mg 1x4 per oral ac
- If improved in 3-5 days, the drug should be continued for 10 days to prevent nephritis. (In cases it is caused by group A streptococcus), or if the condition does not improve especially in infants, they should be admitted to the hospital.



3. Cellulitis



• General characteristics

Subcutaneous tissue inflammation is an inflammation of the subcutaneous fat layer

Cause

-Streptococcus or Staphylococcus

Symptoms

- The skin is characterized by swelling, redness, warm, and pain.
- The margin of lesion is not clear, often occurs along the limbs
- Fever, Fatigue, Anorexia
- Lymph nodes enlargement







Images available from http://cai.md.chula.ac.th/lesson/s kin/pic/page7.htm



Images available from https://ercare24.com/cellulitis-emergency/

Complications and treatment



Complications

- Sepsis

Treatment

- 1. Take a rest & immobilized the inflamed area, raise the inflamed arms or legs to a high level and use warm compression.
- 2. Give pain medication to reduce fever or pain and;
- 3. Give antibiotics such as
 - : Cloxacillin 250-500 mg 1x4 per oral pc
 - : Erythromycin 500 mg 1x4 per oral ac
- •If improved in 3-5 days, the drug should be continued for 10 days for prevention a recurrence,
- •If the condition does not improve in the patient should be admitted to the hospital. May need to inject 600,000 penicillin into the muscle 2 times a day.





- Inflammation of the dermis and subcutaneous tissue (superficial subcutaneous tissue

inflammation) is caused by a bacteria called Beta Streptococcus A Group

Symptom

- Acute fever, chills, headache, fatigue, loss of appetite, pain, swelling, redness in the skin at the beginning with a small point and continue to expand.
- The skin around the area is clearly convex, separating the edges from the normal skin. When pressed, the color will fade with a slight indentation
- If the size is large, there may be blisters.
- Often occurs in the face, in one or both cheeks, arms or legs, if frequent, may cause the lymphatic tubes to swell permanently.





Erysipelas



Images available from http://www.atlasdermatologico.com.br/disease.jsf? diseaseId=132



Complications and treatment



- Complications
 - Sepsis

Treatment

- 1. Take a rest & immobilized the inflamed area, raise the inflamed arms or legs to a high level and use warm compression.
- 2. Give pain medication to reduce fever or pain and;
- 3. Give antibiotics such as
 - : Cloxacillin 250-500 mg 1x4 per oral pc
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Dermatosis caused by fungal infections



Images from

https://beezab.com/%E0%B9%82%E0%B8%A3%E0%B8%84%E0%B9%80%E0%B8%81%E0%B8%A5%E0%B8%B7%E0%B9%89%E0%B8%AD%E0%B8%99/



1. Tinea, Ring worm



- Eczema or dermatophyte dermatitis (dermatophyte) around the skin, hair, nails, hair follicles.
- Most fungi grow in the epidermis.
- The human skin contains antifungal agents and peeling off of the epidermis.
- •Common in warm and humid countries.
- •Risks: DM, immunocompromised individuals, take antibiotics, and hormone therapies for a long period of time, share items with people who were infected.



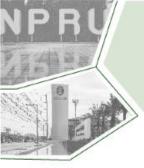
Causes



There are 3 types of fungi that cause diseases in humans.

- 1. Trichophyton
- 2. Microsporum
- 3. Epidermophyton





Location of the fungus



- Ringworm (tinea corporis) occurs in the trunk.
- Tinea cruris occurs in the groin area
- Hong Kong feet (tinea pedis) occur in the area between the toes and soles of the feet.
- Ringworm of the hands (tinea manuam) between the fingers and fingers
- Ringworm on the face (tinea faciei)
- Nail ringworm (tinea ungium)
- Head ringworm (tinea capitis)

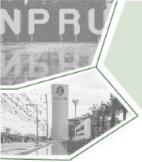
Ringworm (tinea corporis) occurs in the trunk.







Images from http://www.atlasdermatologico.com.br/disease.jsf?diseaseId=454



Tinea cruris







Images from http://www.atlasdermatologico.com.br/disease.jsf?diseaseId=455





Tinea capitis



Images from http://www.atlasdermatologico.com.br/disease.jsf?diseaseId=453



Tinea faciei



Images from http://www.atlasdermatologico.com.br/disease.jsf?diseaseld=456



Tinea manuam







Images from http://www.atlasdermatologico.com.br/disease.jsf?diseaseId=458, 457





Tinea pedis

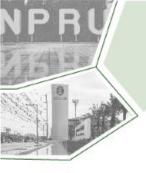






Images from

http://www.atlasdermatologico.com.br/disease.jsf?diseaseId=459



Signs and symptoms



- Initially, a red rash, and itching may be oval or circle in the middle of the rash, have either a normal or red color. The edges are raised, red, and flaky around the area where a large number of infections are found.
- For those applying steroid for rashes, there may be a blister or pustule.
- Ringworm around the red circle, may contain flaky or blistered water, red patches, lumps.
- Grain ringwarm is often found in males.



Diagnosis



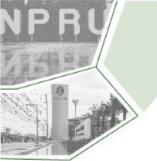
 Usually diagnosed by the nature of the rash but if unable to determine, it can dig at the edge of the wound that can lead to infection (if dyed with KOH, it can determine the presence of an infection)



Treatment



- •Use an antifungal cream to apply 2 times a day for 3 weeks. The rash usually disappears in 2 weeks. Drugs used include
- •Miconazole (Monistat)
- Clotrimazole (Mycelex)
- Ketoconazole (Nizoral)
- •Terbinafine (Lamisil)
- •To get rid of the rash, apply, or continue to take medication for another week for the infection that is still hidden.





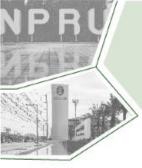
Treatment

• For patients large amount of rashes or unable to apply the medication, use oral medication.

Common and effective include:

- <u>Itraconazole</u>
- ketoconazole
- <u>Terbinafine</u> (Lamisil) 250 mg

Use once a day for 7 days.



Treatment and care



- Keep the body clean as well as the patient clothes.
- •Use lint-free agents such as Whitfield ointment
- Use fungicide
- •Seek a dermatologist for further consultation because the period of treatment is lengthy.



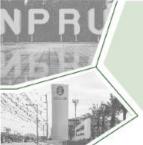
2. Tinea (Tinea versicolor)



 Tinea is a fungal infection in the skin. It can change skin color, some fades, others are darker.

Cause

- Caused by a fungus called Pityrosporum or biculare,
- •It is a superficial fungal skin disease, lives in the pores of people, and eat the fat that is present in the pores as food.
- If the patient has a low immune resistance. This type of fungus will increase in number, cause skin disease to become flaky.
- •This disease is more common in the skin areas that have plenty of sebaceous glands such as the chest, back, etc.



Tinea versicolor







Images from https://medthai.com/%E0%B9%80%E0%B8%81%E0%B8%A5%E0%B8%B7%E0%B9%89%E0%B8%AD%E0%B8%99/



Tinea treatment



 Topical medication, such as 20% sodium sulfide is suitable for a large number of rashes.

Using an ointments containing selenium sulfide or ketoconazole

- Take a shower, wash body thoroughly with soap regularly.
- •Use shampoo with ketoconazole around the affected area, leave the shampoo for 10 minutes before taking a shower. (For two weeks, for those who do not improve, they may need to remain overnight, but there may be skin irritation).





- Dintments containing fungicides such as <u>clotrimazole</u>, <u>ketoconazole</u>, apply at bedtime once a day for two weeks. After that, apply once a week to prevent recurrence.
- Antifungal medications such as <u>ketoconazole</u>, <u>itraconazole</u>, <u>fluconazole</u> are used in extreme cases and should be under the guidance of a doctor because taking these drugs can have side effects when taken for 5 days.
- Personal hygiene such as clothing, towels should be washed and dried before reuse and should not be shared with others.
- Take a shower to keep the body clean.
- Don't let the sweat accumulate.





Behavior when having tinea

- Maintain a clean body thoroughly and regularly. Shower with soap and wipe the body dry
 especially in the niche area such as armpits, groin, prongs, fingers, etc.
- Cut fingernails and toenails short. Always wash hands thoroughly and do not scratch because it will spread the infection to other parts of the body.
- No sharing of personal items. The clothes should be washed thoroughly and wipe it dry and clean.
- When rash occurs, seek health care provider to determine the proper diagnosis.
- Treatment of skin fungus is generally applied with a topical drug 2-3 times a day, until the rash disappears. After the course of topical application, apply for another 2 weeks, using hands and do not rub the eyes.
- For nail and scalp fungus, treatment is more complicated than using oral medication.
- Drugs used includes Micronazole, Clotrimazole.





Dermatosis caused by a viral infection



1. Herpes simplex / herpes



Symptoms: Caused by a virus that appears in groups surrounding redness and became opaque and cracks in 2 weeks, itching

Transmission by direct contact







Images from http://www.atlasdermatologico.com.br/disease.jsf?diseaseId=182







Skin: Group arrangement of lesion ../ Vesicle lesion at....

- Eczematous lesion at......

LN: At nearby organs atenlargecm

Rx - Paracetamol 1-2 tab oral prn. for pain

If the blisters are poked using the needle for aspiration, then use povidine apply prn.

- Do not use! steroid cream
- Acyclovir 5% cream apply every 4 hrs. (5-10 days)
- Symptoms < 5 days. Acyclovir 200 mg sig 1 tab q 4 hrs. for 5 10 days.

2. Herpes Zoster / shingles



Symptoms: Burning-like pain along the nerves for 2-3 days and then the appearance of a red rash, thus becoming a clear fluid Cracked and dry Usually disappears by itself in 2-3 wks. In elderly, it may last 4-5 weeks.

PE.

Skin : Group arrangement at

Zosteriform lesion at

LN: Palpable at.....enlargedcm



Image from

https://www.msdmanuals.com/home/infections/herpesvirus-infections/shingles



- **Rx:** Painkillers such as Paracetamol 1-2 tab prn.
 - The group turns into pustule.
 - : Cloxacillin / Erythromycin
 - If 60 years or lesion expanded to face area
 - : Acyclovir 800 mg q 4 hr. x 7 days

3. Measles

Symptoms: High fever, conjuntival injected, fatigue

- Koplik's is detected 4 days after a continuous fever.
- It usually begins as flat red spots that appear on the face at the hairline and spread downward to the neck, trunk, arms, legs, and feet.

Small raised bumps may also appear on top of the flat red spot.



HEENT : Eyelid edema BE/ no icteric sclera /

- Koplik''s spot at the buccal mucosa
- LN not palpable / Tonsils not enlarged or injected
- No post nasal drip / No rhinorrhea

Skin: Maculo-papular

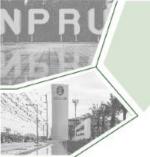






Images from

https://www.shutterstock.com/th/image-photo/viraldisease-measles-rash-concept-doctor-1323694607





<u>Treatment:</u>

- Paracetamol 1-2 tab oral prn.
- CPM 1x3 oral pc
- Rest, drink plenty of water> 3000 cc / day
- No need ATB, Except measles with complications



Image from https://www.nidirect.gov.uk/conditions/rubella



4.Rubella

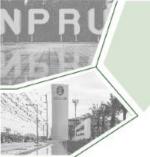
Symptoms: : Low fever, weakness, body aches, enlarged and tendered lymph nodes, pink rash, red spots. rash that appears on the face, the trunk (shown in image), and then spread down the neck, arms, legs, body within 24 hours

PE.

Rubella is a contagious viral infection best known by its distinctive red rash. It's also called German measles.

Skin: Maculo-papular

HEENT: - Post-auricular LN, Occipital LN enlarged and mild tender





<u>Treatment:</u>

- Paracetamol 1-2 tab oral prn.
- CPM 1x3 oral pc
- Rest, drink plenty of water> 3000 cc / day
- No need ATB, Except measles with complications

5. Chickenpox, Varicella



Symptoms: The classic symptom of chickenpox is a rash that turns into

itchy, fluid-filled blisters that eventually turn into scabs. The rash may first show up on the chest, back, and face, and then spread over the entire body, including inside the mouth, eyelids, or genital area. It usually takes about one week for all of the blisters to become scabs.

It can transmission by touching on the accessories of patients who have been blistered with fluids.

Other typical symptoms that may begin to appear 1-2 days before rash include:

- fever
- tiredness
- loss of appetite and headache

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5. Chickenpox, Varicella



Transmission :

Varicella is highly contagious. The virus can be spread from person to person by direct contact, inhalation of aerosols from vesicular fluid of skin lesions of acute varicella or zoster, and possibly through infected respiratory secretions that also may be aerosolized.



Skin: Papulo-Vesicular

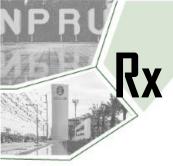


lmage from

https://hail.to/merrin-school/publication/NwAZkO6/article/fZqPudO

Image from

https://www.kgun9.com/news/national/the-chickenpox-vaccine-reactivated-in-two-boys-doctors-think-its-the-first-time-its-ever-happened





- **Rx:-**Paracetamol prn
 - CPM 1 x 3 pc (adult)
 - Rest, drink plenty of water > 3000 cc / day
 - Need PT. should be on isolation for 24 hours for a period of 6 days.
- No need ATB, mostly it will disappear by itself, except chickenpox with complications.-

In case of the lesion turns into pus,

- Cloxa / Erythromycin
- If lesion occur at face area and age 60 years or more prescribe Acyclovia 800 1x5 q 4 hr x 7 days





Dermatitis caused by allergy

- 1. Urticaria
- 2. Contact dermatitis

1. Urticaria



• The reaction of the blood vessels of the skin.

• Red rash, itchy, clear boundaries, different sizes.



• The rash appears for 2-48 hours and It disappears with no lesion remain.

• Can be seen at all ages and genders, but more common in women than in men.

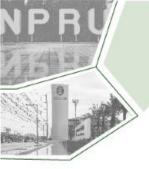




Causes of urticaria



- Medication by oral or injection
- Food or meal: commonly seafood and other crustaceans
- Infection with viruses, bacteria, fungi, parasites
- Insect's sting or parts of the insect or parts of the insect that produces toxins to human skin



Causes of urticaria



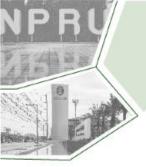
- Pollen, dog or cat fur
- Heat and cold
- Psychological aspects such as emotions, anxiety, anger, stress
- Cosmetics, jewelries, various chemicals



Signs and symptoms of urticaria



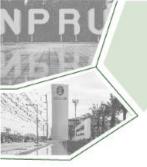
- Start with itchiness
- Small bump, red bump, itchiness
- The blister will expand into large blisters
- May occur in one place or many places that could spread throughout the body
- Some people can experience swelling of the arms, legs, face, mouth, swelling.
- Difficulty of breathing: asthma



Diagnosis



- History taking of the various causes (i.e., illness, medication, use of cosmetics, use of jewelries, food, laundry detergent)
- Signs and symptoms observed on the skin
- Allergies to cosmetics may cause swelling in the eyes and lips.



Treatment and care



- Find the cause and treat accordingly
- If the cause cannot be ruled out, the patient should avoid things that are prone to allergies, such as penicillin, seafoods.
- Providing antihistamines such as CPM. (chlorpheniramine)
- Providing itch suppressants such as calamine lotion
- In severe allergies, difficulty breathing, hypotension, inject 0.5 ml adrenaline IM.
- If symptoms persist, refer the patient to the hospital



2. Contact dermatitis



- Allergic substances such as hair dye, detergents
- Irritating substances such as acids or alkaline
- Poisonous substances or skin irritation when exposed to sunlight.





Signs and symptoms

- Acute stage (acute eczema) swelling, itching, lymphatic sebum with clear blister beads
- Subacute eczema: inflammation decreases, swelling, itching, redness, flakiness. Commonly found in surfaces that always have a contact with allergic substances, such as wearing of shoes that causes the feet to get constantly inflamed.
- Chronic dermatitis is a long, thicker skin, darker, with some flakes, marks that come in contact with allergens, such as bands, rubber shoes.



Acute eczema





Image from http://www.atlasdermatologico.com.br/disease.jsf?diseaseId=113







Subacute eczema



Acute - Subacute - Chronic



Swelling and erythema



Punctate erythema, desquamation



Lichenification

Image from https://www.google.com/search?q=Subacute+eczema&tbm=isch&ved=2ahUKEwjSzrek6IrpAhV-hksFHVTIAJoQ2cCegQIABAA&oq=Subacute+eczema&gs_lcp=CgNpbWcQAzICCAAyBAgAEB4yBggAEAgQHjIECAAQGFD93QtY_dOLYL7mC2gAcAB4AIABXIgBXJIBATGYAQCgAQGqAQtnd3Mtd2I6LWItZw&sclient=img &ei=TfinXpLOI_6MrtoPIJCDOAk&bih=432&biw=998#imgrc=C2Vm9aC2mQIVLM



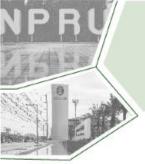


Chronic eczema (contact dermatitis)





Image from
https://www.everydayhealth.com/eczema/g
uide/symptoms/



Diagnosis



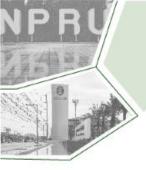
- History of exposure to occupational allergens
- Head: hair dye, shampoo, hair oil, hair conditioner
- Face: cosmetics, perfume
- Lips: lipstick, toothpaste, lozenge
- Hands and arms: detergent, liquid detergent
- Neck: cosmetics, perfumes, jewelries
- Inspection symptoms or skin lesions



Treatment and care



- Avoid contact with allergens
- Wear protective gloves if will be contacting with allergies.
- When exposed to concentrated acids or alkaline, immediately rinse with clean running water for about 5 minutes or (until irritation disappear)
- Providing anti-allergic medication, give antibiotics when if its indicated
- Refer to dermatologists for further treatment if there's no improvement.



TOPIC SUMMARY



- \triangleright -Skin disease is a common disease in both children and the elderly.
- >-Primary medical care should be focusing on history taking to find out the causes of the diseases and examine the lesions which is very necessary because the lesions can tell the difference on the cause of the skin diseases.
- \succ -Treatment of skin diseases includes symptomatic treatment and treatment to prevent complications, especially in small children and the elderly.
- >-Some skin diseases can be contracted by direct contact between person-to-person. Therefore, the patients' isolation is essential.





THANK YOU FOR YOUR ATTENTIONS!



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