

Childhood conditions

Clinical pharmacy
4th stage

Common rashes

- They are associated with self-limiting viral infections.
- They may appear as short-lived fine flat (macular) or slightly raised (papular) red spots, often on the trunk.
- There is usually associated cold, cough and raised temperature.

The causes of rash

1. **Chickenpox (varicella)**

- children under 10 years.
- The incubation period is usually 11–21 days .
- Typically it starts with small red lumps that rapidly develop into minute blisters (vesicles). The vesicles then burst, forming crusted spots over the next few days.
- The spots mainly occur on the trunk and face but may involve the mucous membranes of the mouth.
- The rash is often irritating.

The causes of rash

2. Measles

- an incubation period of about 10 days.
- Appearance through 3–4 days of illness with symptoms of cold, cough, conjunctivitis and fever.
- small white spots (Koplik spots), like grains of salt, can be seen on the inner cheek and gums.
- It starts behind the ears, spreading to the face and trunk.

The causes of rash

3. **Roseola infantum**

- Most commonly in the first year of life.
- There is a prodromal period of 3–4 days of fever followed by a rash similar to measles but which is mainly confined to the chest and abdomen.
- Once the rash appears there is usually an improvement in symptoms, in contrast to measles, and it lasts only about 24 h.

The causes of rash

4. Fifth disease (erythema infectiosum) (slapped cheek)

- Parvovirus B19
- May cause fever, headache and, rarely, painful joints.
- Starts on the face, then appears on the limbs and trunk as small red spots that blanch with pressure.

The causes of rash

5. German measles (rubella)

- The incubation period is 12–23 days.
- preceded by mild catarrhal symptoms and enlargement of glands at the back of the neck.
- It usually starts on the face and spreads to the trunk and limbs.
- The spots are very fine and red. They blanch with pressure.

The causes of rash

6. Meningitis

- caused by bacterial, viral or fungal infections.
- The bacterial causes include meningococcus, *Haemophilus* and pneumococcus infections.
- Meningococcus can cause a septicemia and a typical rash.
- appears as tiny purplish red blotches or bruises.
- These bruises do not blanch with pressure.

Management

1. Fever

- Sponging with lukewarm water. (but can cause goose bumps and shivering).
- Paracetamol or ibuprofen.

2. Itching

- Crotamiton cream or lotion may help to soothe itchy skin.
- Calamine lotion (dry and irritate itchy dry skin).
- Chlorpheniramine.

Colic

- is 'crying for at least 3 h a day, on at least 3 days a week and for at least 3 weeks'.
- It generally begins in the first few weeks after the baby is born and resolves by the time the baby is 3-4 months old.
- It occurs in the late afternoon and evening.
- Baby colic associated with feeding (bottle, breastfed, and formula of milk) and smoking.

Management

1. Mother needs to stop eating all forms of dairy produce.
2. Where the baby is being bottle – fed, the mother might consider trying hypoallergenic formula (caseinogen (casein) hydrolysate) milk.
3. Feeding the infant with small amount of herbal tea which showed a large reduction in crying.
4. Back up the baby on the abdomen and massage them to manage the colic.
5. **Medication:**
 - Dimethicone (simeticone) is an antifoaming agent.
 - Antispasmodic (Antimuscarinics mainly quaternary ammonium compounds).

Teething

- It can start as early as 3 months and continue up to 3 years.
- The teething is associated with discomfort and physical change of baby.
- The symptoms of teething are dribbling, drooling, reddened cheeks, inflamed gums, biting objects and increase in general irritability.

Management

- Local discomforts can relief by using application of cold and the use of analgesics (*paracetamol suspension*) or topical gels.

Napkin rash

- It may be develops at some stage during their infancy.
- It appears as an erythematous rash on the buttock area, sometime occurs during or after diarrhea and follow by secondary bacterial or fungal or both infections.

Precipitating factors

1. A simple irritant dermatitis due to ammonia, produced as a breakdown product of urine in soiled nappies.
2. Irritant substances in urine and feces.
3. Sensitivity reactions to soaps and detergents and antiseptics left in terry nappies after inadequate rinsing.
4. The constant wetting and rewetting of the skin when left in contact with soiled nappies.
5. Maceration of the skin ensues, leading to enhanced penetration of irritant substances through the skin and the breakdown of the skin.

Management

1. Dimeticone emollient preparation (water repellent).
2. Zinc acts as a soothing agent.
3. Lanolin emollient hydrates the skin. It can sometimes cause sensitivity reactions.
4. Castor oil and cod liver oil provide a water-resistant layer on the skin.
5. Antibacterial (*e.g. chlorhexidine gluconate*)
6. Antifungals: *Miconazole* or *clotrimazole* applied twice daily.
7. Hydrocortisone

Head lice

- Common in young children (4-11 years).
- Girls showing a higher incidence than boys.
- Itching of the scalp is an allergic response to the saliva of the lice.
- Reinfection may have occurred from other family members if the whole family was not treated at the same time.
- Wet combing of the hair is a more reliable detection method.

Management

1. Bug busting (a method of wet combing).
2. Herbal treatments (e.g. tea tree oil) and aromatherapy .
3. Dimeticone and isopropyl myristate/cyclomethicone
4. Insecticides (Malathion, permethrin and phenothrin).
5. Carbaryl.

Formulation choosing

- Depend on:
 1. The concentration of insecticide that will be in contact with the scalp.
 2. The length of time the insecticide will be in contact with the scalp.
- Lotions are the preferred treatment for head lice than cream rinse or shampoo
- Alcohol-based formulations are generally useful but are not suitable for all patients because:
 1. alcohol can cause stinging when applied to scalps with skin broken as a result of scratching.
 2. the evaporating alcohol might irritate the lungs and cause wheezing.

Method of application

Lotions (Approximately 50 –55 mL) should be rubbed gently into dry hair and care should be taken to ensure that the scalp is thoroughly covered; the wet hair is then combed. The most effective method of application is to sequentially part sections of the hair and then apply a few drops of the treatment, spreading it along the parting into the surrounding scalp and along the hair. A towel or cloth can be placed over the eyes and face to protect them from the lotion. When applying the product.

Threadworms (pinworms)

- very common in schoolchildren.
- Perianal itching is caused by an allergic reaction to the substances in and surrounding the worms' eggs, which are laid around the anus and worse at night because at that time the female worms emerge from the anus to lay their eggs on the surrounding skin. The eggs are secreted together with a sticky irritant fluid onto the perianal
- Persistent scratching may lead to secondary bacterial infection. Diarrhea may be present and, in girls, vaginal itch.
- The worms can be easily seen in the feces as white- or cream-colored thread-like objects, about 10 mm in length and less than 0.5 mm in width. Males are smaller than females. The worms can survive outside the body for a short time and hence may be seen to be moving. 1 skin.

Management

1. All family members should be treated at the same time.
2. Transmission and reinfection by threadworms can be prevented by the following practical measures:
 - Cutting fingernails short and washing hands
 - Children wearing pajamas to reduce the scratching of bare skin during the night.
 - affected family members having a bath or shower each morning to wash away the eggs that were laid during the previous night.

Management

3. Medication:

- **Mebendazole** is the preferred treatment for threadworms and is an effective, single-dose treatment. It is also active against whipworm, roundworm and hookworm. The drug is formulated as a suspension or a tablet, which can be given to children aged 2 years and over and to adults. A second dose can be given after 2–3 weeks.
- **Piperazine** is effective against threadworm and roundworm. It is available in granular form in sachets. The mode of action of piperazine seems to be paralysis of the threadworms in the gut. The incorporation of a laxative (senna) in the sachet preparation helps to ensure that the paralyzed worms are then expelled with the feces. It can be used for children from 3 months.

Oral thrush

- A fungal infection.
- Most common in babies (particularly in the first few weeks of life).
- It affects the surface of the tongue and the insides of the cheeks.
- It's seen white patches (plaques) which resemble milk curds and not easily removed from the mucosa.

Management

- Miconazole gel is an orange-flavored product, which should be applied to the plaques using a clean finger four times daily after food in adults and children over 6 years, and twice daily in younger children and infants. The gel should be retained in the mouth for as long as possible. Treatment should be continued for 2 clear days after the symptoms have apparently gone, to ensure that all infection is eradicated.
- Nystatin containing preparation.

Thank you

For listening