

Skin rashes ; **A: maculopapular**

B: vesicular

A;-maculopapular rash clinically can be classified into two groups:

1st group ; the skin rash is essential features of the disease and diagnosis cannot be done in the absence of the rash, this group include ;

- a-** with infections : scarlet fever , measles, roseola infantum , erythema infectiosum , and enteroviral infections.
- b-** Skin and allergic conditions e.g. drug rash, sweat rash, papular urticaria and erythema multiformi.

2nd group ; here skin rash is not essential feature , that the diagnosis of the disease can be made in the absence of the rash as;

- a-** infections ; typhoid fever, infectious mononucleosis , and rickettsial diseases.
- b-** rheumatic diseases ; rheumatoid arthritis , SLE, dermatomyositis and Kawasaki disease.

Here in these lectures only causes of the first group (a) will be discussed.

B- vesicular rash include ;

a- common infections: chicken pox, herpes simplex and herpes zoster.

b- skin and allergic conditions: papular urticaria , impetigo and erythema multiforme

Scarlet fever

It is a bacterial disease caused by group A beta-hemolytic streptococci which release an erythrogenic toxin . incubation period 2-5 days affect mostly at 3-10 years old at winter and spring. The disease starts acutely by fever, vomiting and abdominal pain, temp. increases to 39.5- 40°C on the 2nd day and return to normal over the next 5 days, but with antibiotic treatment , the fever drops to normal after 24hrs of initiation of treatment .

The rash appears within 24–48 hr after onset of symptoms, although it may appear with the 1st signs of illness .It often begins around the neck and spreads over the trunk and extremities.

It is a diffuse, finely papular, erythematous eruption producing a bright red discoloration of the skin, which blanches on pressure. It is often more intense along the creases of the elbows, axillae, and groin. The skin has a goose-pimple appearance and feels rough. The face is usually spared, although the cheeks may be erythematous with pallor around the mouth. After 3–4 days, the rash begins to fade and is followed by desquamation, 1st on the face, progressing downward, and often resembling that seen subsequent to a mild sunburn.

Occasionally, sheetlike desquamation may occur around the free margins of the fingernails, the palms, and the soles. Examination of the pharynx of a patient with scarlet fever reveals essentially the same findings as with group A beta-hemolytic streptococci pharyngitis. In addition, the tongue is usually coated and the papillae are swollen. After desquamation, the reddened papillae are prominent, giving the tongue a strawberry appearance.

Typical scarlet fever is not difficult to diagnose; however, the milder form with equivocal pharyngeal findings can be confused with viral exanthems, Kawasaki disease, and drug eruptions. Staphylococcal infections are occasionally associated with a scarlatiniform rash.

A history of recent exposure to group A beta-hemolytic streptococci infection is helpful. Identification of group A beta-hemolytic streptococci in the pharynx confirms the diagnosis, if uncertain.

Complications ; occur especially in those not receiving antibiotics , an **early** complications are related to spread of infection to other areas as sinuses (sinusitis), ears (otitis media) and lungs (bronchitis or pneumonia) while **late** complications occur 2-3 wks later in form of auto-immune diseases as rheumatic fever or post- streptococcal glomerulonephritis.

Treatment

1-Antibiotic therapy for patients with group A streptococcal pharyngitis can prevent acute rheumatic fever, shorten the clinical course of the illness, reduce transmission of the infection to others, and prevent suppurative complications. For the patient with **classic scarlet fever**, antibiotic therapy should be started immediately, but for the vast majority of patients who present with much less distinctive findings, treatment should be withheld until there is some form of bacteriologic confirmation either by throat culture or rapid antigen detection test. Rapid antigen detection tests, because of their high degree of specificity, have made it possible to initiate antibiotic therapy immediately for someone with a positive test result.

The drug of choice is oral phenoxymethyl penicillin (50,000 units /kg/day) in 3ddd for 10 days, while patients allergic to penicillin ; erythromycin (50mg/kg/day) in ddd for 10 days, recently new macrolides as (clarithromycin) or (azithromycin) can be used.

2- antipyretics ; paracetamol to reduce fever and sore throat .

3- bed rest is indicated during 1st few days where fever and abdominal pain are present.

4- liquid and soft diet.

5- health precautions ; the disease is not highly contagious, so strict isolation is not necessary, the child become non-infectious after 24hrs of starting the antibiotic treatment and return to school after 10 days of the onset of the illness.

6- follow up ; re-examination after 3wks of onset is advisable to exclude late complications.

Roseola infantum

It is a viral disease of infants to young children, incubation period about one week , caused by Human herpes virus type 6 and 7. Fever is sudden and increases rapidly to 39.5-41°C .

It remains high for 3-5 days and occasionally more and may lead to febrile convulsion, there is no localizing signs and diagnosed by appearance of skin rash which appears on the 4th day with drop of temp. it start on the trunk and spread to arms and neck rapidly with minimal face involvement, it fades very rapidly in 24hrs. important feature for the diagnosis is the sudden drop of temp.with appearance of the rash.