

Pediatric Exanthems



Disease

Measles

Rubella

Roseola

Presentation

Definition: An exanthem is widespread erythematous rash. Typically macules and papules.

Prodrome: Fever, malaise, loss of appetite, conjunctivitis, cough, and coryza.

Days 2-3: Koplik spots (small white spots with bluish-white centre on buccal mucosa). These spots are a characteristic early sign of measles.

Days 4-5: Exanthem rash.

Prodrome: 1) Fever, 2) Retroauricular or occipital/posterior cervical lymphadenopathy, and 3) Forchheimer sign (petechiae on the soft palate and uvula).

NB. 25-50% of cases are asymptomatic.

Prodrome: High fever (up to 40 degrees Celsius) for 3-5 days, URTI symptoms, irritability and fatigue.

Day 3-5: Exanthem (see below) appears after fever subsides.

Nagayama spots (small rose-pink raised spots that blanch when touched) on soft palate and uvula.

Onset

Most common in children or as a congenital syndrome.

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Children 6 months to 3 years of age. 86% of children affected by age 1.

Exanthem

Flat red macules (5-10mm each), which appear 4 to 5 days after fever onset.

Rash starts on the cheeks then spreads down sequentially to the trunk and limbs.

Pink/light red macules (2-3 mm each).

Rash starts on the face, spreads to the neck, trunk, and extremities.

Small rose-pink or red macules and papules (2-5 mm each), which appear 3 to 5 days after fever onset.

Rash starts on the trunk and blanches when pressed. Some macules are surrounded by a lighter halo of pale skin.

Pediatric Exanthems Continued

Disease	Measles	Rubella	Roseola
Causes	Measles Virus.	Rubella virus. One of the 'TORCH' infections which are commonly associated with congenital abnormalities.	Human herpes virus type 6B (HHV-6B) or type 7 (HHV-7).
Transmission	Highly contagious, airborne respiratory droplets.	Direct contact spread with nasal or throat secretions. Contagious 7 days prior to the rash appearing, and up until 7 days later.	Spread through saliva of asymptomatic individuals. Incubation period of 9-10 days after exposure.
Complications	Pneumonia is the most common cause of death from measles. During pregnancy: Premature labour, fetal loss, and maternal death.	Arthralgia, arthritis thrombocytopenic purpura, otitis media. During Pregnancy: 1st trimester infection comes with a 50% chance of miscarriage, fetal death/stillbirth, congenital rubella syndrome, etc.	Febrile seizures occur in 5-15% of cases in children. Rare complications include acute encephalitis, hepatitis, myocarditis, etc.
Treatments	Supportive care: Rest, fluids, acetaminophen (for fever), Vitamin A (if malnutrition risk).	Supportive care: Rest, fluids, acetaminophen (for fever).	Supportive care: Rest, fluids, acetaminophen (for fever).
Learning Points / Tips	3Cs + 1K = Cough, Conjunctivitis, Coryza and Koplik.	Also known as 3 day measles . Congenital rubella: Blueberry muffin rash, deafness, cataract and patent ductus arteriosus.	Rarely spreads to neck, face arms, and legs.

References

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3. Roseola (viral rash): Causes, Symptoms, and Treatment – DermNet. (n.d.). <https://dermnetnz.org/topics/roseola>
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Image Citations

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2. Rubella (german measles) | DermNet. (n.d.). <https://dermnetnz.org/topics/rubella>
3. Roseola (viral rash): Causes, Symptoms, and Treatment – DermNet. (n.d.-b). <https://dermnetnz.org/topics/roseola>