Viral Skin Diseases

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KEYWORDS

• Exanthem • Latency • Self-limited • Enanthem • Viral shedding • Vaccination

KEY POINTS

- Viral skin diseases range from simple superficial exanthems to complex systemic diseases affecting people of all ages.
- Although not always diagnostic, the characteristic morphology, distribution, configuration, and course of the cutaneous eruptions are key components to the classification and diagnosis of viral exanthems.
- Careful assessment of infectious contacts, immunization status, and aspects of the physical examination are of considerable importance.
- Most viral exanthems are self-limited.
- Treatment, when warranted, is based on the patient's comorbidities, the extent, location, progression of the infection, and the likelihood of severe sequelae.

MEASLES (RUBEOLA)

The first scientific account of measles, differentiating it from other exanthems, is credited to the Persian physician, Muhammad Rhazes, around 900 AD.[1] It belongs to the paramyxoviridae family of the genus *morbillivirus*.[1] Measles is one of the 8 viral childhood exanthems. It is a highly contagious airborne disease that gains entry by the respiratory mucosa or conjunctiva. After an incubation period of approximately 10 days, patients begin to experience flulike symptoms with high-grade temperatures, cough, coryza, and conjunctivitis and then subsequently develop Koplik spots followed by a distinct maculopapular rash, beginning on the face and spreading cephalocaudally.[1] Although vaccination has significantly decreased the incidence of measles in developed countries, it is still prevalent in underdeveloped nations. Unsubstantiated claims suggesting that autism was linked to the measles vaccine has resulted in reduced rates of vaccination and, as a result, a resurgence of measles, mainly in unvaccinated children linked either directly or indirectly to international travel.

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MANAGEMENT STRATEGIES

Management Goals

Measles are self-limiting, typically lasting 10 to 12 days.[2] Mainstays of treatment are supportive measures, good hydration, and primary prevention via vaccination.

Treatment Strategies

Nonpharmacologic strategies

- Increased fluid intake to prevent dehydration
- Nutritional support

Pharmacologic strategies

- Antipyretics for fever
- Vitamin A supplementation has been shown to decrease mortality and morbidity if administered daily for 2 days (**Table 1**). The mechanism of action by which this occurs is still unknown.[3]

Table 1
Vitamin A dosing recommendation

<6 mo old	50,000 IU once daily
6–11 mo old	100,000 IU once daily
≥12 mo old	200,000 IU once daily

From Bello S, Meremikwu MM, Ejemot-Nwadiaro RI, et al. Routine vitamin A supplementation for the prevention of blindness due to measles infection in children. Cochrane Database Syst Rev 2011;(4):CD007719.

Self-Management Strategies

- Hand hygiene and airborne precaution
- Primary prevention by vaccination (refer to **Table 29**)

Evaluation, Adjustment, Recurrence

Complications

Complications most commonly include diarrhea, otitis media, predominantly in children (can lead to hearing loss), and pneumonia (most common cause of death in these patients). More serious complications include superimposed bacterial skin infections in immunosuppressed patients, hepatosplenomegaly, keratitis, encephalitis, and subacute sclerosing panencephalitis.

Recurrence

Immunity after vaccination or infection is thought to be life-long, and recurrence is rare.

EVALUATION/WORKUP

Patient History

See **Fig. 1** for an illustration of the evolution of patient symptoms.

- Atypical measles (seen in individuals vaccinated with the original killed virus from 1963 to 1967 and who have incomplete immunity) presents with subclinical prodrome symptoms and subsequently develops a rash beginning on the hands and feet and spreading centripetally.[1]