

23 – Viral Exanthems

Background:

- **Morbilloform:** describes a measles-like rash that consists of **erythematous macules** and **papules** that **coalesce** on the **trunk, arms, and legs**
 - o Think first of “bugs and drugs”
 - Viral/bacterial infections in kids and meds in adults
- In viral exanthems, the virus disseminates to the skin and mucosa from the blood, and the rash we see clinically is the pt’s immune response to that virus in the skin

PEARL: Viruses such as measles or parvovirus B19 cause an exanthem most of the time, whereas others like RSV cause exanthems <1% of the time.

Classic Childhood Exanthems 1-6

- 1) Measles (*Rubeola*)
- 2) Scarlet Fever
- 3) German Measles (*Rubella*)
- 4) Duke’s disease
- 5) Erythema Infectiosum (*Parvovirus B19*)
- 6) Roseola Infantum

Clinical Presentation:

1) Measles (Rubeola)

- Highly infectious RNA virus transmitted via respiratory droplets
- **Prodrome of Fever & 4 “C’s”:** **Cough, coryza, conjunctivitis, Koplik spots** (white-grey papules on buccal mucosa) → **few days later a morbilliform rash starts behind the ears and frontal hairline, spreading caudally**

PEARL: What is a dreaded complication of measles? **Subacute sclerosing panencephalitis**, which occurs around 10 years after acute infection. Presents w/ devastating neurological sx like seizures, coma, and death

2) Scarlet Fever (See Episode 24)

3) Rubella (German Measles)

- **Mild/Short 3-day course, Forchheimer spots** (palatal petechia), **impressive lymphadenopathy**

PEARL: Rare complication includes Post-infection encephalitis (~ 1 in 6000 cases); Is also a TORCH infection (may have vertical transmission from mother to baby) and may lead to Hearing, Vision, CV defects, mental retardation

5) Erythema Infectiosum (5th/Slapped Cheek disease)

- Caused by Parvovirus B19 (ssRNA virus)
- **Flu-like prodrome of fevers, headaches, myalgias, & small joint arthralgias** (10%) → after several days characteristic **erythematous slapped cheeked** rash occurs → ~2-3 days later they then develop

morbilloform eruption on extremities that may take on more of a **reticulate, lacy pattern**

6) Roseola Infantum

- Caused by HHV 6 > HHV 7
- Infants 6-12 months
- **High fevers <102 degrees Fahrenheit up to 5 days, while child does not appear to be very ill** → followed by faint, **rose-pink morbilliform rash that favors the trunk and lasts a few days** → **not infectious after rash presents**
 - o Associated features include **febrile seizures**, upper respiratory sx, lymphadenopathy, **Nagayama’s spots** (red macules on soft palate and uvula)

Miscellaneous

PEARL: Herpes Viral Infections 1-7

- o HHV 1,2: Herpes Simplex
- o HHV3: Varicella-Zoster
- o HHV4: Epstein-Barr (EBV)
 - Mono, Gianotti-Crosti syndrome, Oral hairy leukoplakia, Hydroa vacciniforme, Burkitt’s lymphoma, NK/T cell lymphoma
- o HHV5: Cytomegalovirus
 - Most common (MC) congenital infection and MC cause of “blueberry muffin baby” (extramedullary hematopoiesis)
- o HHV6: Roseola > Pityriasis Rosea
- o HHV7: Pityriasis rosea > Roseola
- o HHV8: Kaposi sarcoma, Castlemann’s dz, primary effusion lymphoma (PEL)

PEARL: What is **Gianotti-Crosti Syndrome**? Aka papular acrodermatitis of childhood, is usually seen in pre-school age kids. Present with symmetric, monomorphous, pink-brown papules on face, buttocks, and extremities w/ **relative sparing of the trunk**

PEARL: Can you name **3 non-human herpes viruses** that can cause **upper respiratory infections and viral exanthems**? Parainfluenza, rhinovirus, influenza type A & B, and enterovirus such as coxsackie A16.

- **Coxsackie A16 aka Hand-foot-and-mouth disease** presents with prodrome of fever, upper respiratory, and possibly GI sx → **develop vesicular eruption or erythematous macules on hands, feet, mouth, buttocks, and thighs**
 - o Self-limited but **very contagious** → **hygiene is crucial to prevent spread**

PEARL: Child w/ lesions localized to one armpit or inguinal crease? **Unilateral laterothoracic exanthem**

PEARL: Adult who is **sick** enough to be in the hospital and you're suspicious for **viral** cause? What are some other viruses you should be thinking about?

Dengue, Chikungunya, Zika, Mono (EBV), acute HIV

Treatment:

- **Supportive**