Roseola

Pathophysiology

1. Primarily Human Herpesvirus-6 (dsDNA) infection, less frequently HHV-7
    - Transmitted by aerosolized respiratory secretions
        - Replicates in leukocytes, salivary glands
        - Invades CNS (seizures), GI (hepatitis)
    - Remains latent in lymphocytes, monocytes and possibly in salivary glands, kidneys, lungs and CNS
        - Possible reactivation
    - Two subtypes A, B
        - HHV-6A: may reactivate in severely ill adult patients, not consistently linked with any disease
        - HHV-6B: causes 99% of HHV-6 associated roseola
    - May be associated w/MS, lymphoma, chronic fatigue syndrome
2. Epidemiology
    - May be responsible for up to 45% of pediatric febrile illnesses
        - Most common exanthem in <2yo
        - <6mo rare (maternal Abs)
    - Peak: spring-fall; 7-13mos
    - 30% w/clinical Sx; 86% w/antibodies by 1yo
3. Morbidity/mortality
    - Severe disease in immunocompromised
        - Benign disease in vast majority
        - Encephalitis, pneumonitis, chronic infection

Diagnostics

1. **History/Symptoms**
    - Incubation: 9d (5-15d)
        - Most pts. w/o known exposure
    - Prodrome: usually asymptomatic
        - May include minimal rhinorrhea, conjunctival tenderness and cough
    - Abrupt onset of fever (101-106° F [41° C]) x3-5d
        - Behavior usually normal, some may be irritable
        - Febrile seizure (15%): especially infants
        - Immunocompromised: w/malaise, CNS, other organ involvement
    - Defervescence -> w/in 48hrs: non-pruritic rash (fades hrs-2d)
    - Rash may not be present
        - Generalized febrile illness in infants
        - Mononucleosis-like syndrome
        - Encephalitis, pneumonitis, hepatitis in immunocompromised
2. **Physical Exam**
    - Rash: generalized small pink Papules / Maculopapular, blanching
        - Trunk -> neck/extremities
    - **Nagayama spots**: mucosal erythematous papules on palate/uvula
    - May have LAD, HSM, conjunctival erythema
    - **Berliner's sign**: palpebral edema

3. **Diagnostic Testing**
    - Labs
        - CBC: leukocytosis with appearance of rash
        - LP (if indicated): nl glucose, nl/elevated protein, mild pleocytosis (mononuclear)
        - Serology not reliable or timely

Differential Diagnosis

1. Occult bacterial infection (incl. occult bacteremia, UTI, meningitis)
2. Rubella
3. Meningococcemia
4. Fever of unknown origin
5. Viral syndromes
6. Measles
7. Scarlet fever/strep pharyngitis
8. Drug hypersensitivity
9. Kawasaki dz

Acute Treatment

1. Supportive care
2. Acetaminophen, Ibuprofen (avoid ASA)
3. PO fluids

Disposition

1. Admit
    - Pts. w/severe complications, unable to tolerate PO

Further Management

1. Isolation not indicated
2. Diagnostic testing
    - Rarely needed unless higher probability of other diagnoses
    - Serology (PCR): if Dx in doubt
3. Medications
    - Antipyretics (Acetaminophen), hydration
    - Immunocompromised: Ganciclovir, Foscarnet
4. Follow up
    - Usually unnecessary as benign self-limited in nature
    - Initial fever may suggest significant problem but rash classically follows fever usually yielding the appropriate diagnosis

References

1. Nelson Textbook of Pediatrics, 17th ed., Copyright © 2004

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