CASE HISTORY #1:

A 4 year-old female presents with a diffuse rash, onset 3 days prior. She had fever for the first two days of the rash but since then has not had fever. On examination she is irritable but alert. She has diffuse vesiculopustular lesions over her entire body (including her scalp), with some areas showing older, crusted lesions. She is frequently scratching the rash. The liver and spleen are not enlarged.
Question #1

What is the primary route of transmission for this infection?

A. Mother to child
B. Respiratory inhalation of virus.
C. Fecal-oral contamination

Answer: A

Question #2

Vaccination for VZV:

A. Reduces the incidence and severity of disease.
C. Eliminates the risk for chickenpox.

Question #3

What antiviral drug would be used to treat this patient?

A) Valacyclovir/Valtrex
B) Gancyclovir
C) Pritelivir
D) None is effective at this stage

Answer: A
CASE HISTORY #2:

A 64 year-old male presents with a rash, onset 3 days prior. The patient describes initial tingling, itching, and prickling skin, followed several days later by a group of fluid-filled blisters on a red, inflamed base of skin. The patient also reported fever, fatigue, and a headache.

Question #4

What is your clinical diagnosis for this infection?

A. Smallpox infection, contact the CDC.
B. Reactivation of VZV, Shingles.
C. Staph aureus infection, treat with antibiotics.
Question #5

How can the incidence of Shingles be reduced?

A. Vaccination to boost immune response.
B. Taking vitamins.
C. Avoid exposure to children with chickenpox.

Shingrix is even more effective than Zostavax at reducing the incidence of Shingles

<table>
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<th>Age</th>
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<th>Incidence rate per 1000 patient-years</th>
<th>% Efficacy</th>
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N = total number of subjects; n = number of reported cases of shingles
CASE HISTORY #3:
The patient is a 12 month-old white female with fever to 104o F daily for 2 days. She has been examined twice during this time by her pediatrician who found no abnormalities on physical exam. Blood cultures obtained on the second day of fever were negative for bacterial growth.
On the third day, the fever abruptly resolved. Later that evening over a few hours time, the child developed a rose-pink maculopapular rash over the entire body. She was alert, playful and taking fluids orally well. The rash faded over the next 2-3 days.

Question #6
The Pediatrician suggests a clinical diagnosis of Roseola. What is the most common viral etiology of this condition?

A. HHV-6
B. HHV-8
C. Enterovirus
D. Adenovirus
CASE HISTORY #4:
A 16-year-old white male presents with a two week history of sore throat and lethargy. The patient was previously healthy. When the illness first began, he complained of a sore throat and fever up to 103°F. He saw his physician, who noted pharyngeal erythema and exudate as well as cervical lymphadenopathy. The physician swabbed the patient's throat and obtained a rapid Strep antigen test which was negative. While awaiting the throat culture results the physician prescribed an antibiotic. Throat culture results were negative, but the patient developed copper colored macular/popular eruptions that became confluent over the trunk and extremities.

Question 7. What is the most rapid and cost-effective test used to detect this infection?
A. RT-PCR of respiratory sample
B. Detection of heterophile antibodies
C. Detection of IgM/IgG to VCA
D. Detection of Downey Cells
E. Detection of viral load in the serum

Example of rash after antibiotic treatment.

Is the patient allergic to this antibiotic and should you advise against any future use of this antibiotic?
Question #8

What other tests are useful for evaluating patients with infectious mononucleosis?

A. RT-PCR of respiratory sample
B. Culture respiratory sample to evaluate CPE
C. Detection of IgM/IgG to VCA for EBV and CMV
D. Evidence of Downey Cells in the blood
E. Detection of viral load in the serum

Case 5. A pregnant women at 20 weeks gestation complains of a low grade fever and rash. She has recently travel to Brazil. What are the potential causes for this clinical presentations and what concerns might the patient have about her unborn child?

Question 9: What viral agent is likely to be responsible for this infection?

A. Zika virus
B. Dengue virus
C. Yellow fever virus
D. Chikungunya virus
E. Eastern equine encephalitis virus

Clinical features of Zika Virus Infection in Pregnant Women.
Question 9. How is Zika virus transmitted?

a) Bite of an infected mosquito
b) Mother to fetus

c) Sexual transmission from infected semen
d) All of the above

Good luck on the MHD Exam and on the Boards!!