

Project: Ghana Emergency Medicine Collaborative

Document Title: Herpes/Varicella/Shingles

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Herpes

- Caused by *Herpes varicella zoster* virus
 - HSV type 1 most commonly causes cold sores. It can also cause genital herpes
 - HSV type 2 is the usual cause of genital herpes, but it also can infect the mouth
- Disseminated herpes zoster is defined as more than twenty skin lesion outside the affected dermatome

Herpes Symptoms

- A prickly sensation in the genital area
- Small sores that gradually blister and open up and become painful
 - The blisters then heal, dry and disappear without leaving scars
- Flu like symptoms may also become evident
- Some women may also notice vaginal discharge
- Swollen lymph glands of the groin are evident in some cases of herpes
- Some people experience painful urination
- The symptoms recurs 4 to 8 times in a year

Complications of HSV

- When it affects the eye there is pain and discharge
- Pregnant women with herpes tend to pass on the infection to the newborn at the time of delivery and the painful lesions are evident on the newborn's skin
- Birth acquired herpes may lead to very serious complications that include seizures, encephalitis, problems related to the nervous system and the brain

Disseminated Herpes

- If the herpes virus has spread all over the body then it is called disseminated herpes



- Disseminated herpes shows symptoms of complications of the kidney, liver, respiratory and nervous system

Complications of HSV

- Apart from the painful blisters, that accompany birth acquired herpes are
 - Cyanosis
 - Lethargic appearance
 - Tendency to bleed more often
 - Possibility of seizures
 - Decreased body temperature
 - Decreased appetite

Herpes

- Symptoms may vary from simple to severe. The initial outbreak is seen by the appearance of blisters that erupt and dry in a few weeks time. There are other symptoms like flu, fatigue and loss of appetite too. When herpes throughout the body it is called 'disseminated herpes' and the severity of symptoms can lead to death



Transmission

- To cause infections HSV must come in contact with
 - Genitals
 - Mouth
 - Eyes
 - Open sores
 - Sexual transmission
 - Pregnant woman can transmit HSV to the fetus

Nursing Intervention

- If the patient has an oral lesion ask about sore throat, increased salivation anorexia, and mouth pain
- Primary episode:
 - Fever
 - Malaise
 - Enlarged lymph node
- Not a primary episode:
 - Tingling
 - Itching
 - Painful sensation at site of lesion

Nursing Interventions

- If the patient has a genital lesion:
 - Obtain a detailed summary of sexual activity
 - # of partners
 - Barrier protection/birth control
 - Oral or anal intercourse
 - History of STD's
 - Burning with urination
 - Inspect patients lips/oral mucosa for lesions or inflammation
 - Inspect genitalia for lesions or discharge

Treatment

- Antiviral drugs inhibit virus replication and may suppress clinical manifestations
- Acyclovir (Zovirax) provides initial, recurrent, and suppressive therapy for genital HSV
- Oral acyclovir has been shown to be effective in suppressing herpes in immuno-compromised patients with frequent recurrent infections
- Begin use during the prodromal period



Treatment of HSV

- Administer famciclovir (Famvir) or valacyclovir (Valtrex) for recurrent episodes of genital HSV
- Herpes simplex is treated with topical 1% trifluridine (Viroptic)
- In pregnancy, the use of antiviral agents such as valacyclovir and acyclovir has been shown to be safe
- Many patients may require narcotics to relieve severe pain from the lesions

Treatment

- Magic Mouthwash – when patients present too late in the course of disease for antivirals to be of significant benefit, they may be offered to patients with recurrent outbreaks for symptomatic relief
 - 4 oz. Maalox/Kaopectate
 - 4 oz. Benadryl
 - 1 oz. Viscous lidocaine
- Fluids

HSV Patient Education

- Patients with genital HSV infection should be encouraged to inform their current sex partners they have HSV and inform future partners before initiating a sexual relationship
- Sexual transmission of HSV can occur during asymptomatic periods
- Patients should be advised to abstain from sexual activity when lesions or pro-dromal symptoms are present

Patient Education

- Latex condoms, when used consistently and correctly, can reduce the risk for genital herpes when the infected areas are covered or protected by the condom

Varicella

- Also known as **Chickenpox** is a viral infection in which a person develops extremely itchy blisters all over the body



- An acute, highly contagious disease

Symptoms

- Itchy, vesicular rash, usually starting on the scalp and face
- Initially accompanied by fever and malaise
- As the rash gradually spreads to the trunk and extremities, the first vesicles dry out (7–10 days)
- The disease may be fatal, especially in neonates and immunocompromised individuals

Complications

- VZV-induced pneumonitis or encephalitis
- Group A streptococcal infections
- Following infection, the virus remains latent in neural ganglia; upon subsequent reactivation, VZV may cause zoster (shingles), a disease affecting mainly immunocompromised individuals and the elderly.

Mortality

- Risk of death:
 - lower for children than infants
 - increases with age for adolescents/adults
- Children less than 1 year is 6-8 per 100,000
- 1-14 years is 0.75 per 100,000
- 15-19 years is 2.72 per 100,000
- 30-49 years is 25.2 per 100,000
- Encephalitis occurs in older teenagers and adults in 1 per 3000 (WHO)
- 30 % of children with leukemia and lymphoma who acquire varicella have severe infections and the mortality is 21% (WHO)

Transmission

- Transmission is via droplets, aerosol or direct contact, and patients are usually contagious from a few days before onset of the rash until the rash has crusted over

Prevention

- Prevention Options
 - vaccination
 - school omission
- Recommended for all children between 12 and 15 months of age and again between 4- and 6-years of age
- Recommended for adolescents and adults who have not had chickenpox
 - One dose of the vaccine is given to children less than 13 years old and two doses -separated by at least one month - are recommended for people 13 years or older.

Vaccination

- YES
 - > 1 year of age
 - varicella susceptible
 - no history of chicken pox
 - no contraindications
- NO
 - < 1 year of age
 - immunodeficient in household
 - pregnancy
 - mild natural chickenpox

Patient Education

HOW TO CARE FOR YOUR CHILD

- DO NOT GIVE ASPIRIN
- Daily baths with clean cloths will prevent the blisters from becoming infected
- Keep the child's fingernails clean and cut short
- Have the child wear cotton mittens at night or socks on his hands at night to prevent scratching the rash
- Try not to break the blisters or disturb the scabs or they may leave scars.

Patient Education

WAYS TO RELIEVE ITCHING

Most children get irritable and cry a lot

- Apply calamine lotion (not Caladryl) to the rash 2 to 3 times a day and at bedtime
- Dress your child as you normally would (loose, cool clothing is best)
- A baking soda bath will relieve itching (one cupful of baking soda per each inch depth of lukewarm bath water)

Patient Education

WHEN TO CALL THE DOCTOR

Call your doctor if any of the following occurs:

- Temperature above 102 degrees F
- Chickenpox blisters look infected (redness, soreness, pus)
- A chickenpox blister is very close to the eyes.
- The child's ears begin to drain and the child complains of pain
- Itching is so intense that your child cannot sleep.
- Your child begins to cough
- Your child has improved and then has sudden, repeated vomiting
- Sudden tiredness or problems with his or her balance

Shingles

- Shingles develops on its own in a person who has already been affected by chickenpox
 - Technically, shingles is not contagious. But again, the person who has been affected by the chickenpox virus, may develop shingles at a later part of his life
 - People who stay at risk of contracting the infection are those with a weak immune system due to illnesses like HIV/AIDS, etc. injury or other reasons. Older adults vulnerable too.
- Main precautions for shingles is to avoid coming in contact with the shingles-affected patient, until the open sores heals
- Once the sores crusts over, the disease does not remain contagious any more

Shingles Symptoms

- Early symptoms
 - headache, sensitivity to light, and flu-like symptoms without a fever
- itching, tingling, or pain where a band, strip, or small area of rash may appear several days or weeks later
- may appear anywhere on the body, but it will only be on one side of the body blisters that scab and clear over a few weeks

Isolation Precautions

Shingles:

- Gloves and gowns while treating the patient
- Thorough hand washing procedures before and after dealing with the patient and limiting any transfer procedures of the patient
- Advise the patient to stay in a room with the door closed

Isolation Precaution

Varicella (chicken pox)

- Airborne Precautions
- Airborne transmission occurs by dissemination of either airborne droplet nuclei or dust particles containing the infectious agent
- Microorganisms carried in this manner can be widely dispersed by air currents and may be inhaled or deposited on a susceptible host from the source patient

Isolation Precautions

- N95 Mask should be worn and ventilation if possible



- All staff that has not had chicken pox should be excluded from caring for patients with shingles