Shingles (Herpes Zoster)

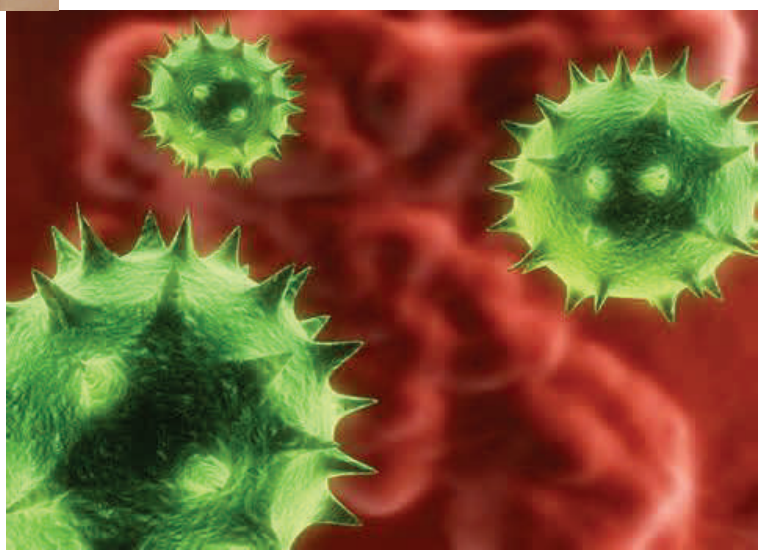
and

Norovirus

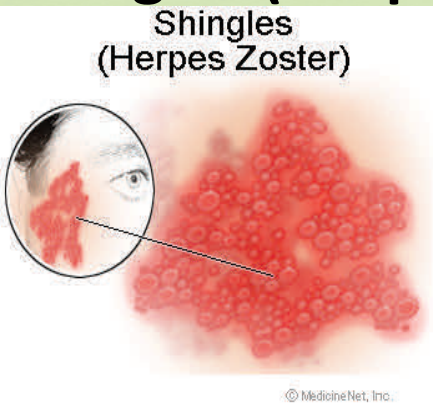
COMMUNICABLE DISEASE NEWSLETTER

scdph

Spring 2014



Shingles (Herpes Zoster)



What is Shingles?

Shingles is a highly contagious, secondary condition resulting from infection with the varicella-zoster, or chickenpox virus. Once the primary chickenpox infection is resolved, the virus lies dormant (inactive) within nerve cells. Reactivation of the virus results in herpes-zoster, or shingles, which can be recurrent since the virus remains in the body for life.

It is estimated that 30% of individuals who have had chickenpox will develop shingles later in life. This amounts to approximately 500,000 to 1 million cases of shingles occurring annually within the United States. Anyone who has ever had, or been vaccinated against, chickenpox can develop shingles. Individuals over 50 years of age and those with compromised immune systems are at the greatest risk.

Diagnosis

Shingles is generally characterized by a unilateral rash (affecting one side of the face and/or body), accompanied by moderate to severe pain localized to the area. The rash usually begins as blisters which scab after 3-5 days and resolve completely within a period of 2 to 4 weeks. Just prior to development of outward signs of shingles, an individual may complain of fever, headache, chills, upset stomach, pain, itching, and tingling in the area where the rash will develop. There are multiple laboratory tests available for confirmation of shingles; however, diagnosis by a primary care physician through examination of the skin rash is sufficient.

Transmission

Shingles is not transmitted through sneezing, coughing or casual contact. Due to the fact that this is a secondary infection, it is not possible to contract shingles from a person with an active form of the disease. It is possible, however, for the varicella-zoster virus to be spread from a person with active shingles to a person who has never had, or been vaccinated against, chickenpox. If an unvaccinated person without prior history of disease came into direct contact with the rash, he/she would initially develop chickenpox, not shingles.

Treatment and Prevention

Oral antiviral medications can be used to decrease the duration and intensity of symptoms associated with shingles. These medications should be instituted as soon as possible after the rash develops, seeing as they are most effective when initiated within 24-72 hours of disease onset. Zostavax is a live, attenuated (weakened) vaccine which provides protection against shingles. The vaccine is administered subcutaneously, and as a one-time dose. Zostavax is recommended for all adults 60 years of age and older, even if they have had a case of shingles in the past. The vaccine, however, is not recommended for those with allergies to neomycin and/or gelatin. The side effects of the vaccine vary for each individual and may include temporary injection site tenderness and swelling. Any individual wishing to be vaccinated against shingles should seek the medical advice of his/her primary care physician or contact the Saginaw County Department of Public Health Immunization Program at (989) 758-3840.

References:

Centers for Disease Control and Prevention. Epidemiology and Prevention of Vaccine-Preventable Disease. 12th ed. Washington DC: Public Health Foundation; 2011: [Pg 301-324].

Centers for Disease Control and Prevention. www.cdc.gov/shingles

Shingles Picture Slideshow. http://www.medicinenet.com/shingles-picture-slideshow/article.htm

Norovirus

Noroviruses are the most common cause of epidemic gastroenteritis, responsible for at least 50% of all gastroenteritis outbreaks worldwide, and a major cause of foodborne illness. In the United States, approximately 21 million illnesses attributable to norovirus are estimated to occur annually. There have been substantial advances in detection and reporting of the disease during the past decade and there is an increased emphasis on prevention and control measures.

Noroviruses are members of a group of viruses called caliciviruses. They were first identified in 1968 in Norwalk, Ohio and thus described as “Norwalk-like” viruses for many years. Noroviruses cause acute gastroenteritis in persons of all ages.

Symptoms: The illness typically begins after an incubation period of 12-48 hours and is characterized by acute onset, non-bloody diarrhea, vomiting, nausea, and abdominal cramps. Some persons may experience only vomiting or diarrhea. Others may also have low-grade fever and body aches, therefore this illness is often referred to as “stomach flu” but actually there is no biologic association with the influenza virus.

Norovirus continued..

Although symptoms may be severe, they typically resolve without treatment after 1-3 days in otherwise healthy persons. However, infants and young children, the elderly, and those with other underlying disease and weakened immune systems may experience a more prolonged course of illness lasting 4-6 days. Approximately 10% of persons with norovirus gastroenteritis seek medical attention, which may include hospitalization and treatment for dehydration with intravenous fluid therapy.

Transmission: The single-stranded RNA noroviruses are extremely contagious requiring as few as 10 viral particles to infect. The virus can be detected in stool for an average of 4 weeks following infection, although peak viral shedding occurs 2-5 days after infection. Studies continue to determine if people can develop any protective immunity to norovirus, as it remains a mystery as to why some persons do not develop illness despite significant exposure and also that 30% of those infected with norovirus can be asymptomatic.

Humans are the only known reservoir for human norovirus infections, and transmission occurs by three general routes:

Person-to-person: Transmission may occur directly through the fecal-oral route, by ingestion of airborne viral particles in vomit, or by indirect exposure from objects or surfaces.

Foodborne: Transmission typically occurs by contamination from infected food handlers during preparation and service. Food can also be contaminated at any time during production, processing, and distribution. A variety of products have been implicated in outbreak investigations; food eaten raw (e.g. leafy vegetables, fruits, and shellfish) have been identified most commonly. Only a small dose of the virus is needed to cause infection, and thus food handlers who have norovirus infection can contaminate large quantities of food product.

Waterborne: Transmission can occur through recreational or drinking water when there is contamination. People with diarrhea caused by norovirus should not use recreational water venues (e.g. swimming pools) for two weeks after symptoms resolve.

Incidence: Recent CDC studies suggest that norovirus is the leading cause of acute gastroenteritis in the community and among persons seeking care in outpatient clinics or emergency departments across all age groups.

Outbreaks can occur in a variety of settings; e.g., nursing homes, hospitals, schools, childcare centers, colleges, prisons, military encampments, restaurants, catered events, cruise ships, bus tours, and airplane travel. Environmental contamination and close proximity to those who are ill facilitate transmission.

Diagnosis and treatment: Identification of norovirus is best made from stool specimens collected as early as possible during the acute phase of the illness, preferably between 48-72 hours after onset of symptoms. Good results can also be obtained on stool samples taken as long as 7-10 days after symptom onset. Currently, there is no antiviral medication that works against norovirus and no vaccine to prevent infection. Antibiotics are ineffective in treating a norovirus infection. Treatment is supportive, with fluid replacement encouraged as tolerated to prevent dehydration. Medical attention should be sought if symptoms last for longer than 48 hours, if the person exhibits signs and symptoms of dehydration (e.g. ,listless behavior, fever, headache, dry skin, extreme thirst), and if the stool contains blood or mucous, as there may be another cause for the diarrheal illness.

Prevention:

Hand washing: Because of the highly infectious nature and the fact that the virus continues to be shed in the stool for up to 4 weeks after an illness, appropriate hand hygiene is likely the single most important method to prevent norovirus infection and control transmission. Reducing any norovirus present on hands is best accomplished by thorough hand washing with running water and plain or antibacterial soap. Washing with soap and water reduces the number of microbes on the hands by mechanically removing the virus. Avoid putting your hands near your mouth and remember to wash hands at these times:

- Before meal preparation or eating a meal or snack
- After use of the bathroom
- After handling objects (e.g. ,money) or having contact with pets
- When hands are visibly soiled
- When someone in the household is ill

Recent studies have shown that alcohol-based hand sanitizers are not effective against norovirus.

Exclusion and Isolation: Considering the highly infectious nature of norovirus, exclusion and isolation of infected persons are often another important means of interrupting transmission of virus and limiting contamination of the environment. This is especially true in situations where people live close to one another, e.g. long-term care facilities, acute-care hospitals, cruise ships, and college dormitories. Infected persons should avoid returning to work or school too quickly and follow the guideline of staying home an additional 24- 48 hours after symptoms have resolved. Exposing classmates, relatives, and co-workers can be lowered through this practice and recovery time has improved in many cases. Persons employed in a health care or food service setting who are infected with norovirus should be excluded while they have symptoms and for 72 hours after they recover from their illness.

Environmental disinfection: The use of chemical disinfectants is another key action in interrupting norovirus spread from contaminated environmental surfaces. High-touch areas (e.g., door knobs, hand rails, handles, etc.) should be given particular attention. Chlorine bleach has been widely recommended as effective in disinfecting human norovirus from surfaces. It should be applied to hard, nonporous surfaces at a concentration of 1,000-5,000 ppm (5-25 tablespoons of household bleach per gallon of water).

Norovirus continued..

Practice food safety measures:

Our food supply no longer comes from the family garden, but has become global with many different countries supplying food products to the United States. Also we eat out a lot more and when food is prepared away from the home and is eaten outside the home or taken home for consumption, there are additional opportunities for contamination. This is why it is important to wash all fruits and vegetables and to prepare and store foods at proper temperatures. For more information on food safety guidance, go to www.fightbac.org.

References:

American Academy of Pediatrics. (2012). Human Calicivirus Infections. In: Pickering LK, Baker, CJ, Kimberlin, DW, Long S.S. eds. Red Book: 2012 Report of the Committee on Infectious Disease. 29th ed. Elk Grove Village, IL; American Academy of Pediatrics; 2009: pp.261-262.

CDC. "Updated Norovirus Outbreak Management and Disease Prevention Guidelines." MMWR. 2011; Vol.60. No.3.

www.fightbac.org

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Communicable Disease
REPORTED FOR SAGINAW COUNTY
For the Quarter
01/01/2014-03/31/2014

Disease	No. Reported
AIDS, AGGREGATE	2
ANIMAL BITE	13
CAMPYLOBACTER	1
CHLAMYDIA (Genital)	284
CRYPTOSPORIDOSIS	1
FLU LIKE DISEASE	2889
GASTROINTESTINAL ILLNESS	263
GIARDISSIS	1
GONORRHEA	49
HEAD LICE	32
HEPATITIS B ACUTE	6
HEPATITIS B CHRONIC	7
HEPATITIS C ACUTE	28
HEPATITIS C CHRONIC	49
HEPATITIS C, UNKNOWN	1
INFLUENZA	89
LEGIONELLOSIS	1
MENINGITIS-ASEPTIC	4
MENINGITIS-BACTERIAL OTHER	2
MYOBACTERIUM	1
SALMONELLOSIS	4
SHINGLES	**1**
STREP THROAT	130
STREPTOCOCCUS PNEUMONIA, INVASIVE	2
SYPHILLIS-LATE LATENT	1
TUBERCULOSIS	1
VZ INFECTION, UNSPECIFIED	3
YERSINIS ENTERITIS	1

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This newsletter is provided to all Saginaw County healthcare providers, hospitals, schools, local colleges, universities, urgent care facilities and local media centers.

If you would like to receive this newsletter by e-mail please submit your e-mail address to: kburlingame@saginawcounty.com

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