Otterbein University
Digital Commons @ Otterbein

Nursing Student Class Projects (Formerly MSN) | Student Research & Creative Work

2016

Shingles

Kimberly M. Holland
Otterbein University, kimberly_holland@att.net

Follow this and additional works at: https://digitalcommons.otterbein.edu/stu_msn

 Part of the Health and Physical Education Commons, and the Nursing Commons

Recommended Citation

Holland, Kimberly M., "Shingles" (2016). *Nursing Student Class Projects (Formerly MSN)*. 147.
https://digitalcommons.otterbein.edu/stu_msn/147

This Project is brought to you for free and open access by the Student Research & Creative Work at Digital Commons @ Otterbein. It has been accepted for inclusion in Nursing Student Class Projects (Formerly MSN) by an authorized administrator of Digital Commons @ Otterbein. For more information, please contact digitalcommons07@otterbein.edu.

www.manaraa.com

Shingles

Kimberly Holland, BSN, RN
Otterbein University, Westerville, Ohio

Introduction

In the United States nearly one out of three people in their lifetime will develop shingles, which also recognized herpes zoster or zoster ("CDC," 2016). In the United States there are an estimated one million cases of shingles each year ("CDC," 2016). Shingles, also known herpes zoster, is triggered by reactivation of the varicella zoster virus (Kochhar, 2014). Shingles are described as vesicular skin lesions, which are very painful and is usually directly related with an underlying nerve pathway (Oakley & Goodband, 2013). Shingles has affected several of the author's family members and she has often wondered if family history of shingles pre-disposes her to a shingles outbreak. The author also seeks to gain knowledge about the effectiveness and benefits of receiving the shingles vaccination to help determine her decision in receiving the vaccination herself.

Disease Process and Those Effected

Varicella-zoster virus (VZV) causes chickenpox (varicella), and a person's initial infection causes a systemic illness that involves an extensive vesicular rash that is extremely contagious in the early stages that is usually accompanied with a fever and is more frequently observed in children (Corden, 2014). Herpes zoster, also recognized as shingles, which is a double-stranded DNA herpes virus, results from the reactivation of varicella zoster virus (VZV) (Gupta & Farquhar Smith, 2012). Shingles is a disorder observed more frequently in older people and those who due to illness or medications, are immunocompromised (Corden, 2014). In person's over the age of eighty-five, it is estimated that the risk of developing herpes zoster increases to fifty percent in those who have not been vaccinated and the risk is greater among females (Cohen, 2014).

People who have never had chickenpox or the varicella vaccine, low birth weight or premature infants, are also at greater risk of developing shingles (McCall & Parker, 2013).

Disease Process and Those Effected cont.

Shingles can be diagnosed by the distinctive appearance and manifestation of the rash (Cohen, 2014). Shingles is only contracted by the direct skin contact of an affected area with the rash and the rash will continue to be contagious until the lesions dry up. Those who are contagious should to be instructed to avoid contact with anyone who has not had chickenpox, anyone who is immune compromised, and women who are pregnant (Cohen, 2014). Anyone who has not had the varicella vaccine or previously had chickenpox can contract chickenpox from someone infected with shingles (Cohen, 2014).

Pathophysiology

Shingles is triggered by the recurrence of the chickenpox virus (herpes zoster) which, after initial infection, lies inactive in the anterior horn cells of peripheral sensory nerves, next to the spine (Lowth, 2013). After initial infection with chickenpox (varicella) the virus stays in a clinically dormant condition in the spinal and cranial sensory ganglia (Gupta & Farquhar, 2012). When the virus reactivates it goes back down nerve axons affecting the skin in the area of the nerve with the traditional painful rash (Lowth, 2013).

(Yahoo website, n.d.)

Significance of Pathophysiology

Shingles is described as a vesicular rash on one side of the body, which is painful and has a dermatomal distribution (a dermatome being the area of skin supplied by a single, particular nerve root) (Oakley & Goodband, 2013). The usual location for shingles to develop in people who are not immunocompromised is the thoracic nerves, so consequently in the skin covering the ribs, but shingles can ultimately affect any nerve root (Corden, 2014). Shingles can cause scarring and can also affect the nerves in the ears and eyes (Corden, 2014). The virus reproduces and causes necrosis and inflammation in the dermatomal skin, the time period taken by the virus to reproduce is known as the prodome period (Gupta & Farquhar Smith, 2012).

Signs & Symptoms

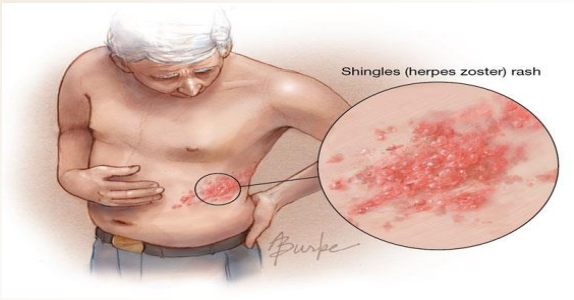
In the prodromal phase a burning, itching, sharp pain occurs a few days before in the areas where the shingles vesicles or rash develops (Shannon, Anderson, & Damle, 2012). Many people describe prodromal pain where skin lesions consequently appear (Gupta & Farquhar Smith, 2012). The prodromal period usually continues for several days but may prolong for a week or more (Gupta & Farquhar Smith, 2012).

Signs & Symptoms cont.

"Erythematous, small, well-defined and discolored areas of skin (macules) and solid rounded bumps in the skin, (papules) develop in the early phases of shingles, followed by fluid-filled sacs, (vesicles) which ultimately crust over" (Corden, 2014, p. 60). Patients should be in contact isolation while hospitalized for a herpes zoster outbreak because open lesions that result from the herpes zoster rash are deemed contagious until the lesions are dried because the discharge contains the varicella zoster virus (Shannon et al., 2012). The blisters or vesicles will start to dry and establish scabs that will usually begin to come off around two to three weeks (McCall & Parker, 2013). Once the rash resolves, there may be subsequent scarring and changes in the pigment of the skin (Corden, 2014).

Prevention & Treatment

"Prevention strategies include primary varicella vaccine to decrease the incidence of chicken pox, zoster vaccine to decrease the incidence of acute herpes zoster, antiviral medications to treat acute zoster, and aggressive pain control for acute herpetic neuralgia" (Philip & Thakur, 2011, p. 767). To reduce the severity of a shingles outbreak antivirals such as acyclovir, valacyclovir, famciclovir are used (McCall & Parker, 2013). Antiviral medications help to reduce the intensity of herpes zoster pain in the acute phase and its effect on quality of life and help to decrease the extent of the herpes zoster outbreak period (Gan, Tian, & Tey, 2013). Antiviral medication should be taken within seventy-two hours of the first rash development to achieve the maximum effect (Corden, 2014).



(Yahoo website, n.d.)

Prevention & Treatment Cont.

Antiviral medication is typically given to affected individuals who are either:

- Over 50
- Under 50 in either of the following categories:
  1. immunocompromised.
  2. demonstrating ophthalmic involvement.
  3. symptomatic with moderate-to- severe pain or with a moderate- to-severe rash (Corden, 2014, p. 62).

Pain Control

Sufficient pain control is very important because herpes zoster can be extremely painful. Herpes zoster pain can be separated into acute pain which can continue for up to thirty days, subacute pain lasting thirty to one hundred and twenty days, or chronic pain which lasts from three months after the rash heals or four months after the beginning of the prodromal period (Gupta & Farquhar Smith, 2012). The pain of acute herpes zoster can be decreased by the administration of corticosteroids, which enhances healing of lesions and helps people return to their daily routines faster (Gan et al., 2013).

Pain Control Cont.

Acetaminophen or non-steroidal anti-inflammatory drugs (NSAIDs) can be used alone or combined with tramadol or a weak opioid to manage mild to moderate pain (Kanbayashi & Hosokawa, 2013). Opioids such as oxycodone or morphine can be given if pain is moderate to severe (Gan et al., 2013). "If moderate to severe pain is not controlled with opioids, consider using gabapentin or pregabalin, tricyclic anti-depressants (TCAs), or corticosteroids" (Gan et al., 2013, p 80). Topical Capsaicin ointment can be used as well as lidocaine patches (Oakley & Goodband, 2013).

Complications of Shingles

Shingles can cause complications in some people and are usually related to the patient's personal risk factors and the site of the rash. A shingles rash usually heals in ten to fourteen days but pain can linger for months or years (Lowth, 2013). "Post-herpetic neuralgia (PHN) is described as chronic pain, lasting three months or longer, with skin alterations in the supply of one or more sensory roots subsequent to herpes zoster infection" (Gupta & Farquhar Smith, 2012, p. 181).

PHN is the most common complication of shingles, which can continue for an extended period of time and considerably affect a person's quality of life (Oakley & Goodband, 2013). A risk factor of PHN is severe acute pain, efficient acute pain relief along with antiviral therapy may decrease the risk of developing PHN (Gan et al., 2013). PHN generally only affects the region of skin supplied by the nerve affected by the shingles outbreak, and is possibly a result of nerve injury by the virus (Lowth, 2013).

"PHN most commonly involves thoracic dermatomes, although in twenty percent of the patients, the ophthalmic division of the trigeminal nerve is involved" (Gupta & Farquhar Smith, 2012, p. 182). Steroids are generally used to treat a shingles outbreak involving the nerves of the face or eyes (McCall & Parker, 2013). Some other complications that occur may need to be treated with medications such as antibiotics, anti-depressants, and analgesics (McCall & Parker, 2013).

Implications for Nursing Care

"The zoster vaccine (Zostavax) is a one-dose, high-potency, live-attenuated vaccine that boosts VZV-specific cell-mediated immunity and was licensed in the USA in 2006 for adults aged 60 years and older" (Gan et al., 2013, p. 83). Many insurance companies will not cover the cost of the Zostavax vaccination, since the median wholesale cost of a single dose is one hundred and ninety-four dollars (Kanbayashi & Hosokawa, 2013). Unfortunately, there is nothing that can entirely prevent PHN, but in a study of 38,000 adults aged sixty and older who received vaccination, the vaccine was shown to decrease the occurrence of herpes zoster by fifty-one point three percent (Lowth, 2013).

There are contraindications to taking the vaccination, but they are mainly barriers such as patient accessibility to the vaccine, being unable to afford the expense of the vaccine, and the education needs of patient's and provider's (McCall & Parker, 2013). Health care professionals and nurses have opportunities to decrease these barriers by initiating plans to find qualified patients, supplying patient education related to vaccine cost, and to help patient's by simplifying access to the vaccine (McCall & Parker, 2013).

Conclusion

In conclusion, shingles is a very painful, debilitating illness which can significantly affect a persons quality of life. Anyone who has had chicken pox can develop shingles. The most successful way to decrease the probability of developing shingles and all of the possible complications and expenses associated to the illness is to receive vaccination (McCall & Parker, 2013).

(Yahoo website, n.d.)

References

Corden, E. (2014). How to identify and treat herpes zoster (shingles)...including commentary by Haigh D. *Journal of Community Nursing*, *28(6)*, 59-64.

Gan, E., Tian, E., & Tey, H. (2013). Management of Herpes Zoster and Post-Herpetic Neuralgia. *American Journal of Clinical Dermatology*, 14(2), 77-85. doi: 10.1007/s40257-013-0011-2

Gupta, R., & Farquhar Smith, P. (2012). Post-herpetic neuralgia. *Continuing Education in Anaesthesia, Critical Care & Pain*, *12(14)*, 181-185.

Kanbayashi, Y., & Hosokawa, T. (2013). Vaccination against and treatment of acute herpes zoster for prevention of post-herpetic neuralgia. *Current Pain & Headache Reports*, *17(10)*, 371-371. doi.org/10.1007/s11916-013-0371-6

Kochhar, S. (2014). Be aware: Reducing the incidence of shingles. *Nursing & Residential Care*, 16(12), 678-681.

Lowth, M. (2013). Shingles and neuropathic pain. *Practice Nurse*, *43(12)*, 20-25.

McCall, B. S., & Parker, D. M. (2013). Shingles (Herpes Zoster): Vaccine for a healthy future. *AAACN Viewpoint*, *35(4)*, 4-8.

Oakley, S., & Goodband, A. (2013). The introduction of a new preventive vaccine for shingles. *Practice Nursing*, *24(11)*, 550-555.

Philip, A., & Thakur, R. (2011). Post Herpetic Neuralgia. *Journal of Palliative Medicine*, 14(6), 765-773. doi: 10.1089/jpm.2011.9685

Shannon, H. J., Anderson, J., & Damle, J. S. (2012). Evidence for interventional procedures as an adjunct therapy in the treatment of shingles pain. *Advances in Skin & Wound Care*, *25(6)*, 276-284.

OTTERBEIN UNIVERSITY