SEXUALLY TRANSMITTED INFECTIONS IN THE ELDERLY: NURSING IMPLICATIONS FOR PREVENTION AND EDUCATION

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Introduction

Sexually transmitted infections (STI) in the elderly have just recently been discussed in the literature and despite what some people think, the elderly are still sexually active. According to the National Council on the Aging, 48% of 1300 people (aged sixty or older) surveyed reported that they were sexually active (Calvet, 2003). The elderly population is viewed as “high-risk” for STIs, including HIV/AIDs, for a number of reasons; such as their age or changes in the immune system (Letvak & Schoder, 1996). Because STIs are a serious public health issue across the life span, there are nursing implications for education and methods of prevention to decrease the rates of STIs including for the elderly. There is no age barrier that protects you from STIs. STIs are a problem in our society especially with the increasing number of those in the elder population.

Epidemiology

Rates of specific STIs in this population vary depending on the disease. The rate of chlamydia in those 55 and older is less than 5 per 100,000 adults (Calvet, 2003). There are less than 10 cases of gonorrhea per 100,000 adults 55 and older (Calvet, 2003). Because the Herpes Simplex Virus (HSV-2) is not a mandatory reportable disease, the rates can’t be calculated as accurately. It is estimated that about 25% of cases of HSV-2 reported occur in adults 50 and older. Human Papilloma Virus (HPV) is the most common STI, although it is not a mandatory reportable disease. In the elderly population, HPV related cancers are the biggest concern. Ninety-three percent of cervical cancers are caused by HPV

and 25% of new cases of cervical cancer reported occur in women 65 and older. Although there are no definitive numbers, conclusions can be drawn about the high risks that HPV can cause among the elderly population (Calvet, 2003).

The number of people with HIV/AIDs is increasing in the elderly population. According to the National Institute on Aging (NIA) (2009), about 25% of all HIV/AIDs cases are found in individuals 50 and over. Ten percent of confirmed AIDs cases are in individuals over 50, and 3% of cases are in those over 60 (Zagaria, 2003). Part of this increase could be attributed to the advancements in tracking and treatment over the past few decades. People with HIV/AIDs are living longer because of advanced combinations of medicines available (NIH, 2009).

Early syphilis is less common in the elderly population, with a rate of less than one case per 100,000 adults 55 and older (Calvet, 2003). However, latent and neurosyphilis is more common (Calvet, 2003). Latent syphilis has no signs or symptoms of the disease for at least one year after the initial exposure to the infection. The patient must have a positive nontreponemal test (VDRL or RPR) and a positive treponemal (FTA-ABS or MHA-TP) test without any previous history of syphilis diagnosis. A patient may also have latent syphilis if he or she has had a history of syphilis treatment and their nontreponemal titer is four times greater than the last one they received (CDC, 2012). Neurosyphilis occurs when the organism that causes syphilis, *Treponema pallidum*, invades the central nervous system (CDC, 2012). This can occur at any stage in the disease and causes a number of neurological syndromes (Calvet, 2003). Patients with

neurosyphilis may present with meningitis, dementia, deafness, optic atrophy, and sometimes even strokes. Elderly people may be tested for syphilis after presenting with one of these syndromes; however, the tests (VDLR or RPR) are not always accurate, with about 25% of tests showing to be false-negatives. (Calvet, 2003).

Risk Factors

There are a number of reasons why the elderly population is considered to be “high risk” for STIs. The simplest risk we can attribute to the high prevalence of STIs is the age itself of this population. The immune systems of the elderly population are not as strong as they once were. They are more susceptible to a variety of infections, and STI’s are no exception (Letvak & Schoder, 1996). Another age-related risk factor occurs in post-menopausal women. The vaginal wall thins in postmenopausal women and decreases in estrogen levels cause the mucosal lining of the vagina to be more susceptible to abrasions. The increase in abrasions provides more opportunities for infectious organisms to enter the body (Letvak & Schoder, 1996). The elderly population is also at risk for having latent stages of diseases with the possibility that they contracted the disease many years ago and had no signs or symptoms until recently (Letvak & Schoder, 1996). A risk factor that is unique for members of this population is that blood donated for blood transfusions was not screened for HIV/AIDs until 1985 (Chiao, Ries, & Saunde, 1999). Contaminated blood was estimated to cause 15% of HIV/AIDs cases in individuals 50 and older. Because of proper blood screening and handling, these numbers have gone down over the years (Chiao et. al,

1999). However, there may still be members of the elderly population alive today who contracted the disease in this manner.

Another factor that puts this population at greater risk is the growing number and concentration of people in assisted living and nursing homes (Richards, 1999). When it is no longer safe or feasible for an elderly individual to live in their home by themselves, options include: a family member to take them in or for them to move to an assisted living facility or nursing home. The number of people moving into facilities has risen over the past fifty years (Richards, 1999). In these living environments, sexual partners may be more readily available and if relationships aren't monogamous, one infected person can give the infection to multiple partners (Hogsett & Sweet, 2011).

Prevention and Detection

Members of the elderly population are less likely to use condoms than other age groups. According to Zagaris (2003), elderly people are six times less likely to use condoms than people in their 20's (Zagaria, 2003). There are a number of different theories as to why this occurs, however, lack of education is at the center. Elderly people may not recognize the risk for STIs. Many elderly couples have been in monogamous relationships for most of their lives. When a spouse dies, it is natural for the other person to have relationships with other people. Because they have been in one relationship for so long, they may not know the risks of engaging in sexual activities with others (Letvak & Schoder,

1996). Another reason some elderly people may not use condoms is because they are past their reproductive years and no longer have to worry about getting pregnant. If members of this population don't view themselves at risk for STIs once the threat of pregnancy is gone, they may no longer see the need to use protection (Letvak & Schoder, 1996).

Elderly patients can be asymptomatic when they have these diseases. Their symptoms may also present differently or be misdiagnosed as another disease (Letvak & Schoder, 1996). It is common for primary care providers to miss STIs in the elderly population. Health care providers may not consider that their elderly patients are sexually active (Letvak & Schoder, 1996). Lesions on an elderly patient's gentiles are not assumed to be herpes, but another diagnosis that makes more sense to the provider given the patient's age: lesions related to incontinence (Letvak & Schoder, 1996). The common symptoms of HIV/AIDs, which usually consist of aches and pains, can be mistaken for normal signs of aging in the elderly (NIH, 2009).

As stated earlier, health care providers may not consider their elderly patients to be sexually active or to be at risk for transmitting and contracting STIs. Elderly patients may not be comfortable discussing their sexual lives with others resulting in a barrier when trying to obtain a sexual history on a patient (Letvak & Schoder, 1996). Health literacy when it comes to terminology may also be a barrier. According to the National Networks of Libraries of Medicine (2012), health literacy is the capability of individuals to obtain, process, and apply knowledge to make decisions about their health. Health care providers may

overestimate patients' health literacy levels, which may lead to problems, such as medication adherence and follow-ups with procedures. Elderly patients may not understand some of the questions related to their sexual history or not have the same knowledge as the younger population about safe sex practices (Letvak & Schoder, 1996).

Screenings can be done to detect diseases and to facilitate those infected from transmitting it to others. There are many different screening tests available to detect STIs. A simple urine test can be done to determine the presence of chlamydia. Nucleic acid amplification tests (NAAT) are performed on the sample. Because the prevalence of this infection is normally low in the elderly population, a positive test should be treated with caution and a second test is recommended (Calvet, 2003). The NAAT's used to detect chlamydia have also been approved to detect the presence of gonorrhea in a patient's urine. However, since the rate of this disease is not high compared to other populations, obtaining a culture from urethral discharge is recommended, as the test is more sensitive (Calvet, 2003). As mentioned earlier, there are screening tests to detect syphilis as well. A positive nontreponemal test indicates the presence of the disease, however, the sensitivity of these tests are high. It is important to be wary about false-negatives (Calvet, 2003). Giving a treponemal test or testing for antibodies against *T. pallidum* can be more accurate for this population when syphilis is suspected but the nontreponemal test came back negative (Calvet, 2003). Blood tests can be done to detect the presence of HSV-2; however these are only done if a patient is showing symptoms. Routine screenings aren't done because it is

thought that there is no reason to look for the disease if there are no symptoms and not bothering a patient (Calvet, 2003). Pap smears are done to detect the presence of HPV or any abnormal cells that may indicate cancer. Postmenopausal women have been shown to be at greater risk for cervical cancers, so it is very important that pap smears be done fairly regularly. There is debate on how often a postmenopausal woman should be screened for HPV and related cancers if they have had normal results throughout their history (Calvet, 2003). The current recommendations are for women over the age of 21 to get a Pap smear at least every three years. If they are between the ages of 65 and 70 and have three normal Pap smears with no abnormal Pap smears in the last ten years providers may exempt them from further tests (Taylor, 2011).

There are also screening tests to detect the presence of HIV. According to CDC (2013), the most common test is an enzyme immunoassay (EIA), which detects the presence of antibodies for HIV. This test can be performed through a saliva sample, a urine sample, or a blood sample. If the results are positive, another test, the Western Blot test, is done to confirm a diagnosis of HIV positive (CDC, 2013). Screenings are also done on all donated blood products beginning in 1985 in the United States, and because of this process, this type of transmission has almost been completely eliminated (Richards, 1999).

Nursing Implications

One could argue that the main reason for the high rates of STIs is due to lack of education in this population regarding this subject. As nurses, it is essential to make sure patients are well educated about their health and possible concerns. The elderly population needs to be educated on many topics when it comes to STIs. First of all, they need to be educated on the fact that they are actually at risk for STIs. It is crucial for them to understand that when they have sex with a new partner, they are exposing themselves to any infections of any past sexual partners the new partner may have had (Letvak & Schoder, 1996). Encouraging open communication between two sexual partners could prevent transmission (Letvak & Schoder, 1996). Tips on safe sex practices, such as using condoms and limiting the number of sexual partners may also help decrease the spread of STIs (Letvak & Schoder, 1996).

When discussing safe sex practices, it is important to recognize any barriers, such as age or health literacy that may hinder education for this population. Those with poor eye sight may have trouble reading material given to them about safe sex practices (Letvak & Schoder, 1996). Health care providers for this population need to make adjustments and take into account age-related hindrances. Providing pamphlets with larger print may help to avoid this problem. Having large pictures may also be helpful. Pictures and diagrams may be especially useful if the patient doesn't fully understand the instructions. It requires a tenth grade schooling level to understand the directions in a box of condoms (Letvak & Schoder, 1996). Giving simple, large printed directions, pamphlets and

diagrams can reduce the barriers and increase the use of safe sex practices, including condoms (Letvak & Schoder, 1996).

Benjamin Franklin once said, “An ounce of prevention is worth a pound of cure”. Preventing diseases is much more effective than treating a disease. Treatment often costs more than prevention. There is a growing shift in the health care paradigm in our society from treating diseases to preventing diseases. Public health is devoted to prevention and screenings instead of waiting for people to be diagnoses. Prevention and early detection of diseases result in better health outcomes and are more cost effective than waiting for a full blown disease or infection. Nurses can provide a number of interventions to prevent the spread of STIs among the elderly population. Asking the patients direct questions during the sexual health history can identify risk factors patients may have (Letvak & Schoder, 1996). Asking questions can determine how high the risk for contracting and transmitting a STI may be for an individual. If an elderly individual states that they are not sexually active, it can be concluded that the risk for this person of contracting or spreading an infection is low. If a patient claims they are active with multiple partners, that patient is at high risk.

Encouraging the use of protection when engaging in sexual activity is also an effective way nurses can help prevent the spread of STIs in the elderly population. Condoms are the primary contraceptive device used prophylactically against STIs (Letvak & Schoder, 1996). Spermicides and vaginal barriers are also effective and can be used (Zagaria, 2003). Elderly people may not feel comfortable talking about sexual history with others; however it is crucial for them

to learn how to ask about any possible exposures to infections before having sex with a new partner (Letvak & Schoder, 1996). Limiting the number of sexual partners can also help prevent the spread of STIs. The greater number of sexual partners, the greater the risk for contracting and spreading STIs (Zagaria, 2003).

Another method of prevention that can help specifically with the spread of HIV/AIDs is proper needle handling. Elderly individuals may use needles for a number of medications such as insulin or heparin. Teaching them how to dispose of needles properly can help reduce the spread of the pathogen. Because HIV/AIDs can be transmitted by using contaminated needles as well as sexually, taking precautions against used or “dirty” needles can help reduce the number of cases (Zagaria, 2003).

Stakeholders

The concept of STI prevention in the elderly is a relatively new topic and not much research has been concluded (Helmes & Chapman, 2012). Elders need education regarding sexual health and at risk behaviors for STIs. Nurses taking care of this population aren’t providing adequately for these patients, and neither are the physicians (Helmes & Chapman, 2012). Feeling awkward talking about this subject with the patients in this population, or it could be because they simply don’t have the age appropriate information themselves (Helmes & Chapman, 2012). Whatever the reason, changes need to be made in order to protect the health of the elderly population. The education programs offered and the methods of teaching need to be adjusted to the population, which includes

patients as well as elder care providers, as does the content. Methods of improving education could include providing workshops or classes at local senior centers and/or for activities in retirement communities. Having material that is easy to read and understand is also crucial for the education to be effective (Letvak & Schoder, 1996). Content may need to be added that applies specifically to the elderly population. Certain age-related diseases, like heart disease, COPD, diabetes, circulation problems, etc. can affect sexual health. Information about how these diseases may affect sexuality need to be made available (Helmes & Chapman, 2012) and may encourage attendance as well as sexual health behaviors.

Organizations involved in the medical care of elderly patients need to collaborate in order to provide the best care for their patients. Collaborations could include local stakeholders, such as the local Department of Public Health, physicians and nurse practitioners who specialize in gerontology, homeless shelters, and other local elder services. There needs to be advocacy about STIs in the elderly on a national level as well. Grants from demonstration projects are offered through various organizations, including the Center for Disease Control. Pharmaceutical companies are also stakeholders. By utilizing a memorandum of understanding between stakeholders, then more can be done to educate the elderly and stop the spread of STIs.

The parties involved can develop a model in which they agree upon how to efficiently and effectively educate the elderly population and reduce the spread of STIs among them (WA Health Networks, 2010). The model should include a

well-defined implementation plan that outlines strategies, identifies roles, and includes a way to monitor the effectiveness of the plan (WA Health Networks, 2010). Since adolescent sexuality education is prevalent in our nation, a test designed for adolescents could be altered to cater to the more specific needs of the elderly population. The implemented model is designed to target the elderly population and focus on their needs as a population.

The Michigan Department of Education has developed a K-12 model to help their students learn about STIs and unplanned pregnancies and give them the information they need to protect themselves. Appendix A could be adapted to fit the more specific needs of the elderly population.

Conclusion

The elderly are a high risk population for STIs, despite any myths or negative connotations associated with older adult sexuality. Members of this population as well as their health care providers need to be educated on risk factors as well as methods of prevention and detection. STIs are easy to detect, but when you're not looking for them, you won't find them. Nurses are responsible for educating their patients about STI risk factors and prevention. Education methods must be tailored Understanding the problem is the first part, now something just needs to be done to change it.

References

Calvet, H. M., (2003). Sexually transmitted diseases other than human immunodeficiency virus infection in older adults. *Aging and Infectious*

Diseases. Retrieved from: http://cid.oxfordjournals.org/content/36/5/609.full

Center for Disease Control and Prevention. (2012). *Syphilis-CDC fact sheet*. Retrieved from: http://www.cdc.gov/std/Syphilis/syph-fact-sheet-october-2012.pdf

Center for Disease Control and Prevention. (2013). *HIV testing*. Retrieved from: http://www.cdc.gov/hiv/basics/testing.html

Chiao, E., Ries, K., & Sande, M. (1999). AIDS and the elderly. *Clinical Infectious Diseases: An Official Publication of the Infectious Diseases Society of America*, *28*(4), 740-745.

Glassmen, P. (2012). *Health literacy*. Retrieved from: http://nnlm.gov/outreach/consumer/hlthlit.html

Helmes, E., & Chapman, J. (2012). Education about sexuality in the elderly by healthcare professionals: a survey from the Southern Hemisphere. *Sex Education*, *12*(1), 95-107. doi:10.1080/14681811.2011.601172

Hogsett, A. & Sweet, D. (2011). Condoms in the nursing homes? *The University of Kansas School of Medicine*. Retrieved from: http://archie.kumc.edu/bitstream/handle/2271/1033/Condoms%20in%20the%20Nursing%20Homes.pdf?sequence=1

Letvak, S., & Schoder, D. (1996). Sexually transmitted diseases in the elderly: What you need to know: The young aren't the only ones at risk for STDs. *Geriatric Nursing, 17*(4), 156-160. doi:10.1016/S0197-4572(96)80063-2

Michigan Department of Education (2009). Sample logic model for school-based HIV/STD and sex education programs. Retrieved from: www.michigan.gov/documents/mde/3_Sex_Ed_Logic_Model_251697_7.doc logic model for sex education

National Institute on Aging (2009). *HIV, AIDS, and older people*. Retrieved from: http://www.nia.nih.gov/health/publication/hiv-aids-and-older-people#sthash.XpaEanhB.dpuf

Richards, E. P. (1999). *Legal issues in using the public health powers to protect the elderly from HIV-AIDS*. Retrieved from: http://biotech.law.lsu.edu/cphl/slides/HIV_in_the_Elderly.pdf

Taylor, C. R., Lillis, C., LeMone, P., Lynn, P. (2011). *The fundamentals of nursing: The art and science of nursing care (7th ed).* Lippincott Williams & Wilkins.

WA Health Networks. (2010). STI model of care implementation plan 2010-2014. Retrieved from: www.ashm.org.au/images/pdfs/wa/sti+model+of+care+s.pdf STI model of care implementation plan 2010-2014

Zagaria, M. E., (2003). Sexually transmitted diseases in older patients. *U.S. Pharmacist, 28(12).* Retrieved from: http://legacy.uspharmacist.com/index.asp?show=article&page=8_1175.htm