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SEXUALLY TRANSMITTED INFECTIONS IN OLDER ADULTS

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Key Words
Infectious diseases
Preventative care

Abstract

A significant proportion of older individuals remain sexually active, and therefore are at risk for sexually transmitted infections. While public health data shows the incidence of chlamydia, gonorrhea, infectious syphilis and HIV in elderly Canadians remains lower than that in younger Canadians, rates are generally rising in the elderly. In addition, elderly individuals show lower rates of safer sex behaviours such as the use of condoms. A special population for consideration is the aging HIV-infected population. While the advent of effective antiretroviral therapy has led to longer life expectancy, this population finds themselves at higher risk of chronic medical conditions, geriatric syndromes and drug interactions due to polypharmacy.

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Key Points

1. Health professionals should take a sexual history in elderly patients and investigate and treat STIs as indicated.
2. Those living with HIV infection are at risk of chronic diseases and geriatric syndromes.
3. Older patients living with HIV infection are at risk for drug interactions and polypharmacy.
4. Sexually active elderly patients should be counselled regarding safer sex practices including the use of condoms.

Introduction

Surveys of sexual behaviour in the elderly from the United States and England reveal that a significant proportion of men and women are sexually active past the age of 65[1,2]. Though sexually transmitted infections (STIs) such as gonorrhea, chlamydia, HIV and syphilis remain far more common in younger populations, sexually active elderly patients are at risk of contracting them as well[1,2,3]. Sexual histories in elderly patients are infrequently conducted by health care practitioners, potentially leaving these patients with unrecognized STIs and increasing the risk of further transmission. A chart review of histories taken by Internal Medicine residents at health care maintenance visits by Loeb et al. showed that only 16% of patients over the age of 65 had their sexual histories taken by the resident completing the history[4]. This review examines surveys of sexual activity in elderly adults, rates of STIs in the elderly in Canada, safer sex knowledge and practices and considerations in the management of HIV in older adults.

Prevalence of Sexual Activity in Elderly Adults

Two nationally representative surveys of elderly adults in the United States and England demonstrated that men over the age of 60 reported sexual activity within the past year more frequently than women. In addition, the proportion of respondents reporting sexual activity declined with increasing age[1,2].

A survey of 3,005 community-dwelling adults aged 57-85 years old in the United States performed between 2005 and 2006 by Lindau et al. demonstrated that 67% of men and 39.5% of women respondents aged 65-74 reported sexual activity (defined as consensual sexual contact) with a partner in the previous 12 months. This proportion fell in the cohort of respondents aged 75-85 with 38.5% of men and 16.7% of women indicating the same[2]. Overall, vaginal intercourse was the most common sexual behaviour in both men and women among the respondents[2]. Similar findings were noted in responses to a sexual activities questionnaire administered as part of the English Longitudinal Study of Aging. The 7,079 respondents in the survey were community-dwelling men and women aged 50 and older living in England. Sexual activity in the previous year was reported by 84.5% of men aged 60-69, 59.3% of men aged 70-79 and 31.1% of men aged 80 years and older. Rates were lower in women, with 59.9% of women aged 60-69, 34.3% of women aged 70-79 and 14.2% of women aged 80 and older reporting sexual activity in the past year[1].

Population Data Regarding Sexually Transmitted Infections in Elderly Canadians

A review of available public health statistics in Canada shows that STIs remain far more common in younger patients compared to elderly patients, and that rates of sexually transmitted infections show an increase over time when all age groups are combined[3]. In addition, rates are generally higher in elderly men compared to elderly women. These are consistent with other reviews of STI rates in the elderly[3].

National data from 2012 on rates of chlamydia, gonorrhea and syphilis infection in Canada were published by the Public Health Agency of Canada (PHAC) in 2015[5]. The rates of chlamydia in people aged 60 and older were 6.3 per 100,000 in males and 3.2 per 100,000 in females[5]. By comparison the rates in those aged 20-24 years old were 1,073.9 per 100,000 in males and 2,151.7 per 100,000 in females. Rates of chlamydia infection in individuals 60 years and older age increased between 2003 and 2012 in both males (2.9/100,000 in 2003) and females (0.9/100,000 in 2003)[5].

The rate of gonorrhea infection in males older than 60 in Canada was 3.7 per 100,000 in 2012 and the rate in females was 0.7 per 100,000[5]. As with rates of chlamydia infection, rates in younger age groups were higher compared to elderly Canadians. Unlike chlamydia, the rate of gonorrhea infection in 2012 in males had decreased compared to 2011 (4.2/100,000) and 2010 (4.1/100,000)[5]. The rates in females had steadily increased from 2003 (0.2/100,000) to 2012[5].

The incidence of infectious syphilis in Canadians 60 years and older was 2.8 per 100,000 in males and 0.1 per 100,000 in females in 2012. The rate in females remained stable compared to previous years going back to 2003 with rates ranging from 0 to 0.1/100,000. The rate of infectious syphilis (i.e., primary, secondary and early latent infection) in males was higher in 2010 compared to 2012 with rates ranging from 2.1 to 2.8/100,000 compared to 1.4 to 1.7/100,000 in 2003-2005[5].

Data regarding the prevalence of HIV-infected individuals in Canada in 2014 from the PHAC is not stratified by age[6]. It was estimated that 75,500 Canadians were living with HIV/AIDS in 2014. From 1985 to 2008, 6,036 of the 62,762 (9.6%) positive HIV tests with age information reported to the PHAC were from patients older than 50[7]. This number is expected to grow as those living with HIV survive longer with currently available treatments[6]. However, there is age-group specific data available regarding the incidence of HIV infections in 2015. The number of reported HIV infections in Canadians 60 years and older in 2015 was 158 or 7.5% of new cases[8]. In 2014 the number was 146, making up 7.1% of cases[8]. Sex-stratified data from 2014 for those older than 50 years showed 340 reported cases in males and 106 cases in females[9]. From 1999 to 2008 the proportion of positive HIV test reports in patients older than 50 years increased from 10.6% to 15.3%[7]. The number of reported new cases remained higher in younger Canadians[8].

Exposure categories for positive HIV tests in Canadians older than 50 years of age show an overall downward trend in the proportion of those associated with men who have sex with men (MSM) from 2004 to 2008 and a concomitant increase in the proportion of heterosexual exposures[7]. This data also shows that sexual exposures in general are more common than intravenous drug use related exposures in older Canadians[7].

Safer Sex Knowledge and Practices

Risk factors predisposing elderly patients to acquiring STIs include behavioural factors such as reduced condom use, knowledge gaps with respect to safer sex practices, as well as host factors such as vaginal atrophy and mucosal dryness[3,10,11,12].

A telephone survey of Swiss adults found that 52.6% of 97 respondents aged 46-65 who had sexual contact with new partners within the last 24 months did not use condoms, and that this age group had the least favourable view of condom use[10]. Similar findings were revealed in an American Associations of Retired Persons (AARP) survey of Americans 45 years and older. The survey found that 50% of males who were single or dating and 42% of all respondents rarely or never used condoms[11]. A Canadian study surveying a convenience sample of people aged 50 and older who spent at least one month in Florida found that few respondents who had dated in the past five years used condoms. Only 13.3% of respondents who had dated in Canada and 14.3% of patients who dated in Florida used condoms consistently[13].

The aforementioned Swiss survey reported that those in the cohort of respondents aged 46-65 scored poorly when it came to questions assessing knowledge about HIV prevalence and testing[10]. However, a 2015 Australian survey of sexually active individuals aged 60 years and older found that respondents had generally good knowledge of the symptoms and causes of STIs, but poorer knowledge of the protection offered by condom use[14]. A 2015 qualitative study of Australians aged 60 and older identified lack of sexual education when growing up, the stigma surrounding STIs and perceived reduced pleasure when using condoms as challenges to safer sex practices[15].

Risk Factors for STIs in the Elderly and Presenting Symptoms

Postmenopausal women are at higher risk of STI transmission due to vaginal mucosal atrophy and dryness, which increases susceptibility to inflammation and injury due to coital friction[12]. Attenuated humoral and cellular immunity in the elderly also makes this population susceptible to STIs[3,12]. An analysis of claims data in

men older than 40 who had filled a prescription for an erectile dysfunction drug showed a higher rate of STIs both in the year before and after starting the drug, highlighting a population that may benefit from counselling regarding safer sex and STIs[16].

Symptoms suggestive of STIs include penile, vaginal or rectal discharge or irritation as well as genital region ulcerations. However, many STIs are asymptomatic and require screening testing. Routine screening for STIs including throat, genital and rectal swabs for GC and chlamydia may be considered in addition to serum syphilis testing in sexually active adults[17]. The Centers for Disease Control in the United States provides guidelines recommending screening for gonorrhea, chlamydia, syphilis and HIV in sexually active men who have sex with men annually, as well as screening for gonorrhea and chlamydia in women older than 25 years of age who are at higher risk of infection[17]. This would include women with new sexual partners, multiple partners or a partner who has other concurrent sexual partners or an STI[17].

Considerations in the Management of Elderly Patients with HIV

Although the management of most STIs is unaffected by the age of the individual, there are a number of important considerations regarding the management of elderly HIV-infected individuals. The availability of effective anti-retroviral therapy for HIV has resulted in a demographic shift in the age of patients living with HIV, the average age increasing, with 33% of people living with HIV being above the age of 50 in North America and Western and Central Europe[18,19,20]. Data regarding mortality and life expectancy of HIV-infected patients when compared to the general population varies, with patients diagnosed earlier or with better controlled disease showing expectancies approaching that of the general population. However, overall individuals living with HIV have reduced life expectancy when compared to matched HIV-negative subjects[19].

Health professionals caring for elderly patients with HIV should be aware of their higher risk for chronic conditions such as renal insufficiency, osteoporosis, coronary artery disease and heart failure; which in part can be related to the effects of treatment with antiretroviral medications[19,20]. Geriatric syndromes are common in older patients living with HIV infection[19,21]. Cognitive impairment, pre-frailty and difficulties with instrumental activities of daily living were the most frequently seen geriatric syndromes in a cohort of 155 mostly male patients aged 50 and older living with HIV in San Francisco[21]. The notion that HIV infection accelerates the aging process remains controversial[19].

The American Geriatrics Society (AGS), American Academy of HIV Medicine (AAHIVM) and Acquired Immunodeficiency Syndrome (AIDS) Community Research Initiative of America released a summary report of their consensus project on HIV and Aging in 2012[22]. Recommendations relevant to health professionals providing primary care to older HIV-positive patients can be found at hiv-age.org/clinical-recommendations/ and include annual measurements of serum creatinine, estimated glomerular filtration rate and urinary protein excretion, screening for diabetes mellitus before and after initiation of antiretroviral therapy, screening for depression and neurocognitive impairments and screening for viral hepatitis at the time of diagnosis[19,22]. With respect to polypharmacy, older patients living with HIV infection are at higher risk of potential drug-drug interactions[23]. Many commonly used drugs and classes of drugs interact with antiretroviral medications including calcium channel blockers, amiodarone, statins, warfarin, clopidogrel, proton pump inhibitors, methadone, phosphodiesterase type-5 inhibitors, antidepressants and benzodiazepines[24].
The recommendations from the AGS, AAHIVM and AIDS Community Research Initiative of America are for regular medication reviews and the use of a single pharmacy for older patients with HIV infection[22].

Conclusions

While sexually transmitted infections are more prevalent in younger populations, the incidence rates for STIs in elderly Canadians are rising. A significant proportion of older adults remain sexually active; thus health professionals should perform a sexual history with their elderly patients. Older patients presenting with symptoms consistent with an STI should have appropriate investigations and treatment as per local guidelines and resistance patterns. Sexually active elderly patients should also be counselled on STIs and safer sex practices including the use of condoms.

The aging population of patients living with HIV requires careful follow up for associated comorbidities such as cardiovascular disease, chronic kidney disease and osteoporosis. In addition, these patients commonly experience geriatric syndromes (e.g., dementia) and are at increased risk of drug interactions between antiretrovirals and other common classes of medications.

Sexuality and intimacy is an integral component of the overall health of elderly patients. Health professionals should ensure that they take opportunities to reinforce healthy sexuality with these patients.

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