The Menopause Society™ | Practice Pearl

Sexually Transmitted Infections in Midlife Women

Released January 9, 2024

Elizabeth Micks, MD, MPH
(University of Washington, Seattle)

Rates of sexually transmitted infections (STIs) are increasing in all age groups. Although STI incidence decreases with age, midlife women have risk factors that may lead to STI acquisition and underdiagnosis. Clinicians may assume that older women are not sexually active. Although many STIs are asymptomatic, when midlife women do experience vaginal symptoms, they may be erroneously attributed to menopause changes. Clinicians should follow evidence-based screening recommendations provided by the US Preventive Services Task Force and consider STIs in the differential diagnosis of vaginal symptoms. Treatment of STIs in midlife women are guided by the Center for Disease Control and Prevention's STI Treatment Guidelines.

According to the 2021 Center for Disease Control and Prevention's (CDC) surveillance on sexually transmitted infections (STIs), the most recent year for which data are published, rates of STIs are increasing in all age groups.[1] A recent Australian study showed that STI rates were increasing faster in older women aged 55 to 64 years compared with younger age groups.[2] Although overall STI rates decrease steadily with increasing age, midlife women have specific risk factors that may lead to STI acquisition and underdiagnosis.[3] In persons who are not at risk for pregnancy because of age and menopause status, there may be decreased use of condoms. Older women are less likely to be vaccinated against human papilloma virus (HPV), and because of changes in recommendations for cervical cancer screening, they may not present for routine pelvic examination and Pap tests. Midlife women may also have relationship changes leading to new sexual partners, although healthcare professionals may assume they are not sexually active.[4] In addition to these biases and behavior considerations, menopausal women have alterations in mucosal immunity that increase the risk of STI acquisition.[5]

Contrary to the common assumption that older women are not sexually active or are in a mutually monogamous relationship, a high proportion of people remain sexually active throughout their lifespans. Societal changes in relationship and sexual norms, technology such as dating apps, improved treatments for age-related sexual dysfunction, and other factors may promote increased sexual activity in midlife people over time. All persons, regardless of age and menopause status, should be questioned regarding genitourinary symptoms, sexual history, and risk factors for STIs

so that appropriate testing and treatment can be provided. Sexually transmitted infections should remain in the differential diagnosis of genitourinary symptoms in midlife persons.

According to the CDC's STI Treatment Guidelines, prevention and control of STIs are based on these strategies: accurate risk assessment and education and counseling of persons at risk regarding ways to avoid STIs, preexposure vaccination for vaccine preventable STIs, identification of those with an asymptomatic infection, and identification of persons with symptoms suggestive of an STI.[6] Once identified, treatment, counseling, and follow-up of persons with an STI, along with evaluation, treatment, and counseling of sex partners, are essential for control of STIs. These strategies are important to consider in the context of midlife women, whose sexuality may be overlooked.

Screening recommendations. The United States Preventive Services Task Force (USPSTF) provides evidence-based guidance for STI screening. The most recent USPSTF guidelines from 2021 recommend annual gonorrhea and chlamydia screening of women aged 25 years and older who are at increased risk for acquiring STIs, including those who engage in high-risk sexual behaviors (report new or multiple current sexual partners, exchange sex for money or drugs, use condoms inconsistently, or have sex while under the influence of alcohol or drugs).[7] The USPSTF also recommends screening for trichomoniasis, HIV, syphilis, hepatitis B, and hepatitis C in persons with increased risk for these STIs (based on behavior characteristics or community prevalence) but does not specify the frequency. Human papilloma virus testing (either primary testing or cotesting with a Pap test) is performed only for cervical cancer screening, per guidelines from the American Society for Colposcopy and Cervical Pathology.[8] Asymptomatic persons do not require screening for genital herpes simplex virus (HSV).

Screening for STIs without an indication in older women may lead to increased healthcare costs while yielding minimal clinical benefit. Studies have demonstrated that healthcare professionals underscreen young women while overscreening older women. In one study, all positive gonorrhea and chlamydia test results were captured by testing only women aged older than 40 years who reported symptoms or an STI exposure.[9] In this context, other STIs to consider include trichomoniasis, HPV, and HSV. And, although bacterial vaginosis is not an STI, it can be overdiagnosed in postmenopausal women and may mimic STIs.

It is important for clinicians to take a detailed sexual history to determine whether persons are at risk for STIs. Menopause changes may lead to challenges maintaining desired sexual activity; taking a sexual history presents an important opportunity to address concerns and assess risk of STI acquisition. This includes the number of sexual partners, the sex of those partners, whether their sexual partners have other partners and the sex of those partners, the specific sexual activities in which they engage, whether barrier methods are used, use of drugs during sexual activity, and exchange of sex for drugs or money.

Symptoms and examination findings. The decision to proceed with STI testing depends on specific symptoms, risk factors, and clinical findings. Although most bacterial STIs are asymptomatic, symptoms may include vaginal discharge, pelvic pain, dyspareunia, dysuria, vaginal irritation, and abnormal bleeding. There is overlap of these symptoms with those of genitourinary syndrome of menopause (GSM), which include vulvovaginal dryness, burning,

vaginal discharge, dysuria, and dyspareunia. Thus, STI symptoms may be commonly missed in perimenopausal and menopausal women.[10] Abnormal discharge in particular may be attributed to GSM. A wet mount showing white blood cells is nonspecific and may be seen with any infection or inflammatory state. Vaginal pH is rarely helpful in evaluating for STIs. Genital lesions and ulcerations are common findings associated with genital herpes and syphilis; genital lesions can be swabbed for viral testing.

Treatment. Treatment of STIs in midlife women is guided by the CDC's STI Treatment Guidelines, which provides current evidence-based prevention and diagnostic and treatment recommendations (Table).[6] Although treatment of STIs in younger women is focused on preventing infertility related to pelvic inflammatory disease, for older women it is important for symptomatic relief and also for reducing the risk of spread to others.

Table. *Sexually Transmitted Infections Treatment Guidelines 2021: Recommended Regimens for Adult Women*

Chlamydia	**Doxycycline** 100 mg orally 2 times/d for 7 d.
Gonorrhea	**Ceftriaxone** 500 mg IM in a single dose for persons weighing <150 kg; 1 g for persons weighing ≥150 kg. If chlamydial infection has not been excluded, treat for chlamydia with **doxycycline** 100 mg orally 2 times/d for 7 d.
Trichomoniasis	**Metronidazole** 500 mg 2 times/d for 7 d
Syphilis (primary and secondary)	**Benzathine penicillin G** 2.4 million units IM in a single dose
Genital herpes simplex virus	Primary: **Acyclovir** 400 mg 3 times/d for 7-10 d Recurrent: **Acyclovir** 800 mg 2 times/d for 5 d

Workowski KA, et al.[6]

PrEP. HIV preexposure prophylaxis (PrEP) is an important consideration for persons with risk factors such as multiple partners or sexual activity with men who have sex with men or with people who inject drugs. Some data indicate differences in PrEP drug metabolism in menopausal women. One study demonstrated lower tenofovir diphosphate and emtricitabine triphosphate concentrations in cervical tissue, suggesting that menopausal women may need higher doses to achieve protective efficacy.[11] Further studies are needed to determine whether midlife and older persons require different medication dosing for PrEP.

Pearls. Although STI incidence is lower in midlife women compared with younger persons, infections can cause symptoms that are easily misdiagnosed as vaginitis or GSM. A detailed sexual history is important to identify risk factors that might prompt screening for specific infections. The USPSTF recommends gonorrhea, chlamydia, syphilis, and HIV screening for asymptomatic women aged 25 years and older who are at increased risk for acquiring STIs, including those who engage in high-risk sexual behaviors. Treatment of STIs is guided by the CDC STI Treatment Guidelines. In women with genitourinary symptoms, including those suggestive of GSM, screening for STIs should always be considered.

References

1. Sexually Transmitted Disease Surveillance 2021. US Department of Health and Human Services, 2023. www.cdc.gov/std/statistics/2021/default.htm.
2. Bourchier L, Malta S, Temple-Smith M, Hocking J. Do we need to worry about sexually transmissible infections (STIs) in older women in Australia? An investigation of STI trends between 2000 and 2018. *Sex Health* 2020;17:517-524. doi: 10.1071/SH20130
3. Monsell E, McLuskey J. Factors influencing STI transmission in middle-aged heterosexual individuals. *Br J Nurs* 2016;25:676-680. doi: 10.12968/bjon.2016.25.12.676
4. Sherman CA, Harvey SM, Noell J. "Are they still having sex?" STI's and unintended pregnancy among mid-life women. *J Women Aging* 2005;17:41-55. doi: 10.1300/J074v17n03_04
5. Rodriguez-Garcia M, Patel MV, Shen Z, Wira CR. The impact of aging on innate and adaptive immunity in the human female genital tract. *Aging Cell* 2021;20:e13361. doi: 10.1111/acel.13361
6. Workowski KA, Bachmann LH, Chan PA, et al. Sexually transmitted infections treatment guidelines, 2021. *MMWR Recomm Rep* 2021;70:1-187. doi: 10.15585/mmwr.rr7004a1
7. US Preventive Services Task Force; Davidson KW, Barry MJ, Mangione CM, et al. Screening for chlamydia and gonorrhea: US Preventive Services Task Force recommendation statement. *JAMA* 2021;326:949-956. doi: 10.1001/jama.2021.14081
8. Wentzensen N, Massad LS, Mayeaux EJ Jr, et al. Evidence-based consensus recommendations for colposcopy practice for cervical cancer prevention in the United States. *J Low Genit Tract Dis* 2017;21:216-222. doi: 10.1097/LGT.0000000000000322
9. Jackson JA, McNair TS, Coleman JS. Over-screening for chlamydia and gonorrhea among urban women age ≥25 years. *Am J Obstet Gynecol* 2015;212:40.e41-40.e46. doi: 10.1016/j.ajog.2014.06.051
10. Drew O, Sherrard J. Sexually transmitted infections in the older woman. *Menopause Int* 2008;14:134-135. doi: 10.1258/mi.2008.008020
11. Nicol MR, Brewers LM, Kashuba ADM, Sykes C. The role of menopause in tenofovir diphosphate and emtricitabine triphosphate concentrations in cervical tissue. *AIDS* 2018;32:11-15. doi: 10.1097/QAD.0000000000001678

Disclosures

Dr. Micks reports no financial relationships with ineligible companies.

This *Practice Pearl*, developed by the author, provides practical information on current controversial topics of clinical interest. It is not an official position of The Menopause Society. Clinicians must always take into consideration the individual patient along with any new data published since the publication of this *Pearl*. The *Practice Pearl* series is led by Editor Dr. Ekta Kapoor. All *Practice Pearls* receive four independent reviews.

Made possible by donations to The Menopause Society Education & Research Fund.