

Special considerations for cervical cancer screening among refugee women of diverse religious and cultural backgrounds

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Abstract

Historically, cervical cancer (CC) has been a leading cause of cancer-related death in women, ranking as the fourth highest in cancer-related deaths worldwide. To combat this high-disease burden, preventive and early detection screening for precancerous lesions with regular Papanicolaou exams, or pap smears, is universally recommended by both the United States Preventive Services Task Force and the American College of Obstetrics and Gynecology for women ages 21-65. Pap smears detect cellular atypia that is almost always a result of altered gene expression caused by infection with human papillomavirus (HPV), which in the case of cervical infection, is almost always sexually transmitted. Despite its known mechanism of transmission, no special considerations currently exist within guidelines for alternative screening for women who deny sexual activity. Reasons to explain the lack of differing recommendations for these women may include unreliability of history taking, high incidence of sexual activity among the general population, and the benefit of screening for cervical cancers not caused by HPV.

When considering the healthcare of women of diverse cultural and religious backgrounds, it is important to consider that the risks and benefits of the same procedure differ across distinct populations. Religious women of refugee status, including Muslims or Christians, may be less likely to be at risk of high-risk HPV infection as cultural and religious customs lead to a later initiation of sexual activity and a lower number of total partners across a lifetime, often limited to spousal relationship. Additionally, they may be at a higher risk of negative outcomes from the procedure, namely in terms of discomfort, embarrassment, or significant anxiety, as a result of decreased openness to genital manipulation and the lack of familiarity with the exam prior to immigrating to the United States. As such, it is important to consider the variable risk of CC in women who presumably have not had any sexual contact, as well as the risk of negative outcomes and ways to mitigate them. This paper intends to quantify the risk of cervical cancer for the general population of sexually inactive women, as well as contextualize the risks of refugees in particular by examining the individual risks of different kinds of sexual activity and the possibilities of underreporting or unknown exposures. Further, it intends to weigh these risks against the increased risk of refugee women for the above-mentioned poor outcomes and offer solutions that may help decrease their occurrence and improve the overall utility of the test.

Background

At the International Family Medicine Clinic (IFMC), a 24-year-old female is due for her routine pap smear. She is informed that it is a test performed on all women of her age group intended to detect cervical cancer (CC). Initially, she does not understand the purpose for the test. She asks, “Are you saying that I have cancer? If I don’t have cancer, then why do I need a test? How would I have gotten this cancer-causing virus?” When it is explained to her that cervical cancer is caused by a virus that is sexually transmitted, she declines the pap smear, saying

“I don’t need that.” In the case of monogamous women, or those who have never been sexually active, one cannot help but wonder if the patient may, in fact, be correct. CC is largely known to be associated with high-risk human papilloma virus (hrHPV), a sexually transmitted viral infection, so why would it be present in these patients?

Guidelines provided by the United States Preventive Services Task Force (USPSTF) and the American College of Obstetrics and Gynecology (ACOG) are in agreement that cervical cancer screening should begin

universally at 21 years of age, regardless of sexual history. [1,2] This recommendation is based on data that show younger women to be at low risk of cervical cancer regardless of risk factors; however, in their published discussion of screening guidelines, neither the USPSTF nor ACOG discusses the need for screening (or lack thereof) in women who have never been sexually active. In the absence of any discussion by the leading bodies, it is unclear whether its usage in women who claim to have never had sexual contact has been validated.

This lack of differentiation may be related to the generally high risk among most women in the United States based on common sexual practices. In the US, 79% of women have sexual intercourse by age 20 with that number rising to 98% by age 25, [3] and therefore taking a sexual history is of low utility in determining the need for a pap smear as the number of patients in the affected age group who have not engaged in sexual contact is likely small. Additionally, many patients who have been sexually active may simply prefer not to tell their care provider.

At the UVA IFMC, a significant number of patients are immigrants from Africa and the Middle East where influences of religion, namely Islam and Christianity, may have marked effects on the sexual activity and sexual promiscuity in young people, with many adherents choosing to delay sexual activity until marriage. This difference in population risks may influence whether it is valuable to apply the same screening guidelines as are used with the general population in the US. As a complicating factor, decreased familiarity with screening, especially with that of an intimate nature, can make CC screening a much more negative experience than it is for natural-born American citizens. [4] The following discussion intends to address the degree to which patient denial of sexual activity may or may not be a protective factor against CC and the manners in which a varied approach by providers may help patients better understand their risks and make informed decisions about screening.

Are women who have never been sexually active at a significantly decreased risk for CC?

A clinician may tell a patient that pap testing is important despite a lack of sexual history because either 1) HPV may be transmitted by other forms of sexual contact and 2) not all cervical cancers are necessarily caused by HPV.

HPV transmission in women apart from penetrative intercourse

Marazzo et al. [5] described three cases of HPV infection by PCR of endocervical samples from 49 women who have sex with women (WSW) who denied any history of male sexual partners, including one case of oncogenic hrHPV and low-grade squamous intraepithelial lesion. Another study by Winer et al. [6] found that genital HPV, including condyloma acuminata, is positively and independently associated with multiple forms of genital contact outside of penetrative sex in women, including finger-vulvar, penile-vulvar, or oral-penile, with a cumulative incidence of 7.9%. Taken together while assuming truthful reporting, this could imply that sexually active individuals who do not engage in penetrative sex are still at risk for endocervical hrHPV infection. As a result, it was the recommendation of Marazzo et al. that WSWs be subject to the same screening guidelines as other women, and a similar suggestion for other women with history of non-penetrative sex would be well within reason.

HPV infection is not the only risk factor for CC

While HPV is thought to be the sole cause of squamous cell CC, the most recent data suggest that other cancers, namely endocervical adenocarcinomas, can arise independently. Endocervical adenocarcinomas currently represent up to 25% of all cervical cancers, with their prevalence relative to HPV-dependent squamous cell carcinomas increasing since the advent of the HPV vaccine. [7]

Using the histologic technique of identifying apoptotic and mitotic figures in cervical samples with HPV *in situ* hybridization as confirmation, Hodgson et al. [8] reliably categorized endocervical adenocarcinomas as either HPV associated (HPVA) or non-HPV associated (NHPVA). Of 87 specimens of endometrial adenocarcinoma, 82% were found to be HPVA while 18% were NHPVA using the above

method. Not only are NHPVAs relatively rare, but they also tend to be much more common in older women¹ and tend to be discovered at later stages with a lower degree of survival even with comparable screening. Additionally, NHPVAs are more likely to carry a genetic component, and thus risks could be discovered with careful history taking. The relative rarity of NHPVAs², the lower utility of early detection, as well as additional risk factors that may make them detectable by other means makes NHPVAs a much less useful target than HPVAs in CC screening.

Considerations for women who deny history of sexual activity

Categorization of sexual contact/undisclosed encounters among women who deny sexual activity

In history taking, many women who say they have never been sexually active may not volunteer non-penetrative sexual acts since personal definitions of sexual activity vary. This is concerning as the aforementioned study by Winer et al. notes that these behaviors can still put a patient at an increased risk of HPV infection. This information may be useful when educating patients and explaining their cervical cancer risk.

Additionally, refugee women especially have been shown to be at markedly elevated risk of sexual abuse, which is typically reported at much lower rates than consensual sexual activity. [9] The National Violence Against Women survey reports that only 40% of women report sexual assault to formal support services (including police and medical personnel), and additional work by Roberts et al. has shown reporting to be even lower in ethnic and racial minorities. [9,10] Some studies show rates of gender-based violence against female refugees residing in Europe exceeding 50%, significantly higher than the general population. [11] Factors driving the elevated rates of GBV in refugees include insecure housing, power differentials

between refugees and perpetrators who have much greater access to resources and may abuse their positions [12], including through transactional sex, and lack of familiarity with justice systems, which makes seeking justice more difficult. It is well-known that many victims of abuse may be more likely than not to keep abuse from their medical provider. Refugees may be at an even greater risk given a lack of shared cultural background, an increased fear of stigma, or even an inability to see themselves as victims in the setting of differing cultural perceptions of sexual assault. [12]

Risks for monogamous women

In addition to women who have not had sexual intercourse, a woman who has only ever had one sexual partner may perceive herself to be at a low risk for HPV infection. Nevertheless, it is important to consider the possibility that a monogamous woman may contract HPV from a non-monogamous partner. Research by Drumright et al. [13] suggests that in the cases of concurrent sexual partnership among people of diverse ethnicities living in the United States, the offended party is seldom aware.

In the case of men in Arab countries, past studies have found that they are significantly more likely to engage in pre-marital sex compared to female counterparts (30-80% of men v. 2% of women), with a large contribution of the sex work industry to provide these encounters. [14] These data suggest a woman's monogamy along with presentation of a singular monogamous partner does not firmly establish a negligible risk for HPV-associated CC.

Potential benefits of education

In counseling patients, it is important to recognize that screening tests of any kind may not be familiar to much of the refugee population. As such, it may be useful to provide education regarding the nature of screening tests: that they are administered in the absence of symptoms to detect disease at a time when it may be more treatable, and that the absence of

¹ Average age 45 years

² Combining historic SEER data (cited in [7]) with Hodgson findings [8] estimates the prevalence of NHPVAs to be 1.8-4.5% of all cervical cancers

risk factors does not necessarily reflect a lack of utility. A study in Turkey shows the most common reasons for refusal of pap smear included fear of pain associated with vaginal examination, embarrassment/privacy concerns, absence of prior familiarity with the test, lack of any symptoms, male doctor, and absence of a physician recommendation. [15]

As the pap smear exam is invasive, education must be provided with particular diligence, as knowing exactly what will occur affects a patient's ability to make an informed decision about their healthcare. It is important to name precise anatomy when describing the exam, as using terms like "privates" leave room for ambiguity. To prevent issues of language barrier, it is necessary to clarify with an interpreter that they use precise anatomy as well and refrain from editorializing or using idioms. Teach-back may prove useful in verifying that a patient understands the procedure, provided that anatomy is named appropriately, and clarifications are made in the case of ambiguity.

Patients can be made to be more comfortable by addressing concerns about pain and privacy. Prior studies have shown the importance of being up-front that the test may be associated with discomfort as the usage of honesty may help to build trust with the patient. [4] Patients may be reassured that a female provider is able to perform the if requested, and that the screening test will not have an impact on external appearance of virginity for pre-marital women, specifically, pap smears do not generally cause any hymenal damage. [16] Patients should be further informed that they have the right to withhold consent for any procedure, as long as an adequate demonstration of the risks of doing so has been performed by the provider.

Providers should also be aware of the diversity of decision-making that occurs in refugee populations. It may be common within certain cultures for a patient's husband to be present at health appointments and to engage in decision-making. [16] While this may have negative impacts on patient care, such as in the case of a

husband who may preclude his wife from obtaining a pap smear for fear his own infidelity will be revealed, it is important to recognize that such actions are culturally appropriate and do not necessarily represent a form of abuse by denial of autonomy. Male partners present at visits should be included in risk/benefit discussions and have their concerns addressed, as their perspective plays a meaningful role in whether screening is obtained.

Conclusion

Factors affecting hrHPV infection and risks for cervical cancer are numerous and difficult to rule out with simple history taking. While history taking cannot be expected to be fully reliable, especially in the refugee population where disclosures may be more difficult due to cultural factors or abuse, even a reliable history does not rule out all cervical cancers, such as adenocarcinoma, which has been shown to sometimes occur independently from hrHPV infection. Additionally, suggesting that certain individuals need not be screened based on sexual risk factors may cause a patient to feel stigmatized if a clinician chooses to recommend screening. [16] On the contrary, adopting a uniform approach to CC screening that applies to all women removes the stigma from recommending screening and does not rely on the comfort level of the patient to ensure adequate screening for patients who have had sexual contact. In general, refugee patients with strong religious backgrounds should not be assumed to be low risk, as sexual behaviors vary and the lack of certain preventive measures, such as vaccination and frequent/early screening, contribute to higher risk in refugee populations. In applying an effective screening approach, it is much more important to offer adequate education regarding the purpose and the experience of screening, as honest discussion is likely to build rapport and could potentially leave the door open for future discussions even if a patient initially declines screening. Cultural sensitivity regarding language barriers, differences of decision-making, and alternative perspectives of healthcare is necessary to reduce alienation of patients and to ensure a healthy relationship between patient and care systems.

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