Accurary of Self-collected Vaginal Swabs in the Diagnosis of Bacterial Vaginosis, Vaginal Candidiasis, and Trichomoniasis

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Accuracy of self-collected vaginal swabs in the diagnosis of bacterial vaginosis, vaginal candidiasis, and trichomoniasis

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Mentor: Linda Samia, PhD, RN, Associate Professor of Nursing

Purpose

To answer the clinical PICOT question:
In patients who need vaginal swabs to diagnose bacterial vaginosis (BV), vaginal candidiasis (“yeast infections”), and trichomoniasis, are self-collected swabs as accurate as provider-collected swabs obtained during a speculum exam?

Background

- Vaginitis, or inflammation of the vagina, is the most common gynecological problem seen in primary care. It is estimated that it accounts for about 10 million primary care visits each year.
- The most common causes of vaginitis - accounting for up to 90% of cases - are bacterial vaginosis (BV), vaginal candidiasis (“yeast infections”), and trichomoniasis.

Evidence Appraisal

- In sexually-active patients 14 years or older living in the US, self-collected vaginal swabs were as accurate as clinician-collected swabs at detecting vaginal candidiasis and BV infections; with $\kappa \geq 0.84$ for BV and $\kappa \geq 0.88$ for VVC indicating almost perfect agreement.
- In patient populations with low literacy levels in India, self-swabs showed moderate agreement with provider-collected swabs for the diagnosis of BV, $\kappa \geq 0.48$.
- There was high agreement between self and clinician-collected vaginal specimens in diagnosis of trichomoniasis, in sexually active patients $\kappa \geq 0.87$.
- Self-swabs used for STI screenings were as accurate at diagnosing trichomoniasis as clinical obtained swabs.
- Patients reported self-collection of vaginal swabs to be easy to obtain and to patients with low literacy levels, self-swabs may be an appropriate alternative to provider-collected swabs in the diagnosis of trichomoniasis.
- Vaginal swabs self-collected for the screening of chlamydia and gonorrhoea may be an appropriate alternative to a provider-collected swab in the diagnosis of trichomoniasis.
- Indicating that testing could be done during routine STI screening, which has important implications for low-access areas.
- With proper instruction, self-collection of vaginal swabs may be an easy experience for patients.
- When deciding which patients to offer self-collected swabbing to, providers should keep in mind that symptoms are a poor indicator of underlying infection and self-swabs do not replace a physical exam.
- Further research is needed to determine the accuracy of self-swabbing in non-sexually active patients.

Evidence Synthesis

- In sexually-active patients 14 years or older living in the US, self-collected vaginal swabs were as accurate as clinician-collected swabs at detecting vaginal candidiasis and BV infections; with $\kappa \geq 0.84$ for BV and $\kappa \geq 0.88$ for VVC indicating almost perfect agreement.
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- Indicating that testing could be done during routine STI screening, which has important implications for low-access areas.
- With proper instruction, self-collection of vaginal swabs may be an easy experience for patients.
- When deciding which patients to offer self-collected swabbing to, providers should keep in mind that symptoms are a poor indicator of underlying infection and self-swabs do not replace a physical exam.
- Further research is needed to determine the accuracy of self-swabbing in non-sexually active patients.

Translation to Practice

- Educate providers on evidence of reliability of self-swabs and appropriate clinical situations for their use.
- Train all clinical staff regarding patient education and the appropriate procedure for collecting self-swabs.
- Provide educational materials and instructions for self-swabs to patients.

Proposed Evaluation

Complete a chart audit for the past 6 months to assess the number of patients who were tested for BV, yeast infections, and trichomoniasis and quantify outcomes of the testing. Track BV, yeast infections, and trichomoniasis testing over the next 6 months, the number of patients who opt for self-swabs, and the results.

Conclusion

- Self-taken vaginal swabs are as accurate and reliable as provider-collected swabs in diagnosing BV, yeast infections, and trichomoniasis and can be an appropriate alternative to provider-collected swabs in diagnosing BV.
- Vaginal swabs self-collected for the screening of chlamydia and gonorrhoea may be an appropriate alternative to a provider-collected swab in the diagnosis of trichomoniasis.
- Indicating that testing could be done during routine STI screening, which has important implications for low-access areas.
- With proper instruction, self-collection of vaginal swabs may be an easy experience for patients.
- When deciding which patients to offer self-collected swabbing to, providers should keep in mind that symptoms are a poor indicator of underlying infection and self-swabs do not replace a physical exam.
- Further research is needed to determine the accuracy of self-swabbing in non-sexually active patients.

References