Self-Administered GBS Testing in Pregnant Women

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Clinical Question

How sensitive and acceptable is self-administered testing for group B streptococcus (GBS) in pregnant women?

Evidence-Based Answer

There is no difference in the sensitivity of swabs for detecting GBS when collected by patients vs. physicians; therefore, either method can be used. (Strength of Recommendation: C, based on cohort and randomized studies.) Patients do not express a consistent preference for self-collection of samples vs. collection by a physician.

Evidence Summary

Four trials compared self- and physician-collected swabs to detect GBS in pregnant patients.[1-4] Each study recruited women at 35 to 37 weeks' gestation. The reference standard in each study was a positive GBS culture by either collection method. Agreement between the two methods was high. GBS prevalence ranged from 12% to 19%. In two of the four trials, cultures were not incubated in an enrichment broth, which may have resulted in a lower GBS prevalence.[2,4]

In a 2006 prospective trial, 330 women (average age = 27.2 years) at a family medicine prenatal care clinic in Canada were randomly assigned to clinician-collected vaginorectal swabs followed by self-collected swabs, or vice versa.[1] The women received written instructions and a diagram of the self-collection procedure. Clinicians were not blinded to the testing sequence. Both collection methods yielded comparable sensitivity (97% clinician-collected vs. 87% self-collected; Cohen's kappa agreement = 0.9; 95% confidence interval [CI], 0.8 to 1). Patients were slightly more likely to prefer self-collection. There were 56 patients who declined to participate. Participants were four times more likely than nonparticipants to have completed high school (odds ratio [OR] = 4; 95% CI, 1.2 to 13.4), and those who declined were more likely to prefer collection by a clinician (OR = 6.9; 95% CI, 2.8 to 17.1).

A 2008 nonrandomized, prospective study of 600 women (average age = 31 years) compared self-collected GBS culture results with those obtained from a subsequent physician-collected sample.[2] Patients were recruited from public and private prenatal clinics in Ireland, and clinic staff explained the self-collection procedure to the patients. As in the previous study, both collection methods had high sensitivity (94% clinician-collected vs. 84% self-collected; Cohen's kappa agreement = 0.9; 95% CI, 0.8 to 0.9). The women preferred collection by a physician over self-collection (43% vs. 28%; 28% reported no preference). The most common reason given was concern about collecting the sample correctly.

A 2000 nonrandomized, prospective study at a military hospital in Colorado alternately assigned 250 women to physician-collected swabs followed by self-collection, or vice versa.[3] Patients received written instructions and a diagram of the self-collection procedure. There was no difference in first vs. second sample sensitivities in either group (93% clinician-collected vs. 84% self-collected; Cohen's kappa agreement = 0.8; 95% CI, 0.7 to 0.9). The women slightly preferred self-collection (58% vs. 42%).

A 2009 retrospective analysis compared GBS culture results from 293 patients who performed self-collection with those of 507 patients in whom physicians collected

the samples.[4] The patients attended two community clinics in Colorado; 75% were Hispanic and 85% were below 200% of the federal poverty level. GBS prevalence was slightly higher in the patient-collected samples (13% vs. 11% in clinician-collected samples), but the difference was not statistically significant. The patients did not receive uniform instructions for self-collection. The authors did not report patient preferences.

Recommendations from Others

The Centers for Disease Control and Prevention and the American College of Obstetricians and Gynecologists recommend universal screening for GBS at 35 to 37 weeks' gestation with samples collected by the physician or, with appropriate instruction, by the patient.[5,6]

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