Bacteriuria Diagnosis and Treatment as a Method to Decreased Preterm Birth

A screening urine culture should be performed for all patient entering prenatal care, ideally in the first trimester. Women at high risk of asymptomatic bactiuria should be re-screened throughout pregnancy (e.g. sickle cell trait, sickle cell disease, history of pyelonephritis, recurrent UTI, spinal cord injury).

Barriers that may hinder routine screening include incorrect collection of a urine sample, improper identification of positive culture results, and missing women who enter prenatal care after the first trimester. Extra steps in the ordering process (ordering prenatal blood work and having to order a separate urine culture) may also result in missed opportunities.

A clean-catch urine culture requires specific instruction to the patient to ensure proper collection. The patient should use a sterile wipe, clean the inner folds of the labia from front to back, and use a second wipe to clean the urethra. With labia spread open by fingers, she should urinate a small amount into the toilet, and then stop the flow of urine. The collection cup should be held a few inches from the urethra and the urine should then be collected. A positive result is any clean catch urine with isolation of the same bacterial strain in quantitative counts 10⁵ cfu/mL. A single catheterized urine specimen with 1 bacterial species isolated in a quantitative count 10² cfu/mL identifies bacteriuria is also considered a positive result. All positive culture results should be treated with antibiotics, but there is insufficient evidence to recommend a specific treatment length in pregnant women. Periodic screening of women with asymptomatic bactiuria should be undertaken after treatment.

Prophylactic antibiotics should be given for those diagnosed with pyelonephritis during pregnancy with attention to any patient allergies or resistance identified in the organism.

This algorithm and key driver material was written by a group of experts in the field of Preterm Birth. It was then reviewed by the Society for Maternal-Fetal Medicine’s (SMFM’s) Publications Committee, Executive Committee and Risk Management.
Standardization of healthcare processes and reduced variation has been shown to improve outcomes and quality of care. SMFM developed these documents to help facilitate the standardization process. These algorithms and key driver documents are “tools” to assist clinicians and practices. The practice of medicine continues to evolve, and individual circumstances may vary. They reflect clinical and scientific advances as of the date issued and are subject to change. They are not intended to dictate a certain management or course of action. We encourage users to adapt them to their particular situation, environment and patient population.

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