Closing the Brief Case: Too Beta To Be a "B"

Jonathan C. Gullett,^a Lars F. Westblade,^b Daniel A. Green,^c Susan Whittier,^c
Eileen M. Burd^{a,d,e}

Department of Pathology and Laboratory Medicine, Emory University School of Medicine, Atlanta, Georgia, USA^a; Department of Pathology and Laboratory Medicine, Weill Cornell Medical College, New York, New York, USA^b; Department of Pathology and Cell Biology, Columbia University Medical Center, New York, New York, USA^c; Department of Medicine, Division of Infectious Diseases, Emory University School of Medicine, Atlanta, Georgia, USA^d; Emory Antibiotic Resistance Center, Emory University School of Medicine, Atlanta, Georgia, USA^e

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ANSWERS TO SELF-ASSESSMENT QUESTIONS

- Which of the following characteristics suggests that an isolate of Gram-positive cocci in short chains that is catalase negative and Lancefield group B antigen positive may be *Streptococcus pseudoporcinus*?
 - A narrow zone of beta-hemolysis, esculin hydrolysis negativity, and hippurate positivity
 - A narrow zone of beta-hemolysis, esculin hydrolysis positivity, and hippurate positivity
 - A wide zone of beta-hemolysis, esculin hydrolysis positivity, and hippurate negativity
 - A wide zone of beta-hemolysis, esculin hydrolysis negativity, and hippurate positivity

Answer: C. Isolates that react with Lancefield group B antigen agglutination reagents and demonstrate a wide zone of beta-hemolysis should raise suspicion for *S. pseudoporcinus*. *S. pseudoporcinus* is esculin hydrolysis positive and hippurate negative. A CAMP test, if performed, is positive. Pyrrolidonyl arylamidase reactivity is varied and can be either positive or negative, depending on the strain.

- What is the normal habitat for *Streptococcus pseudoporcinus* in humans?
 - Vagina
 - Skin
 - Mouth
 - Conjunctiva

Answer: A. *S. pseudoporcinus* inhabits the genitourinary tracts of some women and has been recovered from 1.0 to 5.4% of vaginal-rectal specimens submitted for the detection of *S. agalactiae*.

- Streptococcus pseudoporcinus* is possibly associated with which of the following adverse obstetrical outcomes?
 - Neural tube defects
 - Neonatal sepsis
 - Pregnancy-induced hypertension
 - Premature rupture of fetal membranes and cervical insufficiency

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Address correspondence to Eileen M. Burd, eburd@emory.edu.

See page 1604 in this issue (<https://doi.org/10.1128/JCM.02387-16>) for case presentation and discussion.

Answer: D. Although there is not a definitive association, reports in the literature point to a possible connection between *S. pseudoporcinus* and premature delivery due to rupture of fetal membranes as well as cervical insufficiency.

TAKE-HOME POINTS

- *Streptococcus pseudoporcinus* can be recovered from vaginal-rectal specimens submitted for the detection of *Streptococcus agalactiae*.
- Although *S. pseudoporcinus* belongs to Lancefield antigen groups NG1, E, and P or may even be untypeable, isolates of *S. pseudoporcinus* often cross-react with Lancefield group B antigen agglutination reagents.
- Colonies of both *S. pseudoporcinus* and *S. agalactiae* are large (>0.5 mm) after 24 h of incubation, but *S. pseudoporcinus* has a wide zone of beta-hemolysis on sheep blood agar after overnight incubation compared to the narrow zone (slightly bigger than the colony formed) of subtle beta-hemolysis that is produced by most strains of *S. agalactiae*.
- Risk factors for vaginal-rectal colonization include black ethnic groups, recent *Trichomonas vaginalis* infection, primary or recurrent genital herpes simplex virus infection, bacterial vaginosis, obesity, and two or more male sexual partners during the 1 or 2 months since the last health clinic visit (i.e., increased numbers of sexual partners).
- Vaginal-rectal colonization may be associated with complications of pregnancy, including preterm rupture of fetal membranes and cervical insufficiency.