C-101 Evaluation of GBS Detect and ChromID Strepto B agars for the detection of Group B streptococcus from GBS Screening Broth Medium (GBS)
Zama A. Shah1, Jessica D. Dolfolf2, Sandy Tarlelon1, and R. L. Sautter1
1Carolinas Laboratory Network, Charlotte, NC, and 2Carolinas Pathology Group, Charlotte, NC

ABSTRACT

BACKGROUND: Streplococcus agalactiae (GBS) causes significant morbidity and mortality in the newborn child. In fact, bacteria born to mothers carrying GBS are at risk for early onset disease than those whose mothers are not colonized. Due to their insensitivity, rapid direct tests have not been recommended for screening for GBS in vaginal/rectal samples. The latest guidelines from The Centers for Disease Control and Prevention (CDC) for the detection of carriers include the following recommendations: using a broth culture based system with subculture to routine culture media or using a PCR based method following broth enhanced culture. Approximately 5% of all GBS causing disease fail to produce beta hemolysis on routine culture media.

METHODS: Clinical samples not routinely cultured for GBS when using the CDC culture algorithm. In addition, it is apparent that negative GBS Broth cultures are not being recommended for screening for GBS in vaginal/rectal samples. We would also like to thank Meridian Bioscience®, Inc for their support.

RESULTS: Of 61 GBS positive samples detected by either GBS Detect or ChromID Strepto B, only 52 (85%) were found using GBS broth visual screening. This method includes subculture of positive or negative GBS test results as per CDC recommendations with an overall positivity rate of 28-38%. This method includes subculture of positive or negative GBS test results as per CDC recommendations with an overall positivity rate of 28-38%.

CONCLUSIONS: GBS Detect performed the best detecting all PCR positive samples. Both GBS Detect and ChromID Strepto B are not detecting non-hemolytic strains of GBS in clinical samples not routinely used standard media and protocols.

REFERENCES

1. Crystal J. Redfern, MT (ASCP); Robert L. Sautter, PhD, HCLD (ABB), Near-Patient Testing for Group B Streptococcus (GBS) causes significant morbidity and mortality in the newborn child; in fact, bacteria born to mothers carrying GBS are at risk for early onset disease than those whose mothers are not colonized. Due to their insensitivity, rapid direct tests have not been recommended for screening for GBS in vaginal/rectal samples. The latest guidelines from The Centers for Disease Control and Prevention (CDC) for the detection of carriers include the following recommendations: using a broth culture based system with subculture to routine culture media or using a PCR based method following broth enhanced culture. Approximately 5% of all GBS causing disease fail to produce beta hemolysis on routine culture media.

RESULTS: Of 61 GBS positive samples detected by either GBS Detect or ChromID Strepto B, only 52 (85%) were found using GBS broth visual screening. This method includes subculture of positive or negative GBS test results as per CDC recommendations with an overall positivity rate of 28-38%. This method includes subculture of positive or negative GBS test results as per CDC recommendations with an overall positivity rate of 28-38%.

CONCLUSIONS: GBS Detect performed the best detecting all PCR positive samples. Both GBS Detect and ChromID Strepto B are not detecting non-hemolytic strains of GBS in clinical samples not routinely used standard media and protocols.