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Diagnostics, other than Molecular: Diagnostic/laboratory methods (other than molecular)

Validation of group B streptococci selective agar

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Objectives

Glasgow Royal Infirmary validated 3 chromogenic media (Thermo Scientific™ *Brilliance*™ GBS Agar (Thermo Fisher Scientific), chromID™ StreptoB Agar (bioMérieux) and Colorex StrepB Agar (E&O Laboratories)) for isolation and identification of group B streptococci in low vaginal swabs of pregnant females.

Methods

Ten known NCTC streptococci group A, B, D and G strains, 11 wild-type streptococci group A, B, D and G strains, 6 previously-reported GBS positive and 10 GBS negative swabs were inoculated onto *Brilliance* GBS Agar, chromID StreptoB Agar and Colorex StrepB Agar. In addition, 70 routine GBS screening swabs were cultured blind onto all three media, with the order of inoculation being rotated. All plates were incubated aerobically at 36±1°C for 18- 24 hours. Confirmation of Streptococcal grouping was carried out with Prolex™ Streptococcal grouping kit (Pro-Lab Diagnostics).

Results

Brilliance GBS Agar was found to be the superior agar with no false positive or false negative results. GBS colonies on *Brilliance* GBS Agar were more numerous and larger and the medium inhibited the growth of other (non-target) flora. Colonies on chromID StreptoB Agar were the smallest of the three media. Both chromID StreptoB Agar and Colorex Strep B Agar showed substantial growth of other (non-target) flora. Colorex Strep B Agar gave the highest number of false positive results.

Conclusion

Brilliance GBS Agar has proven to be reliable, sensitive and requires less supplementary work than chromID StreptoB Agar and Colorex Step B Agar. *Brilliance* GBS Agar performed well in the hands of the laboratory and will be adopted for routine use for group B streptococci screening throughout NHS Greater Glasgow and Clyde.