ABSTRACT

Background: Group B streptococci (GBS) are the leading cause of severe perinatal infections. Most current guidelines for the prevention of GBS perinatal disease are based on prenatal screening culture for vaginal GBS colonization. Use of selective and different media could improve the sensitivity of these cultures.

Objectives: To evaluate the GBS-Differential Agar (GBSDA) recently formulated by Becton Dickinson for the selective growth and production of orange colonies of β-hemolytic (H) GBS. To determine optimal conditions for culture and evaluation of results.

Methods: 283 vaginal swabs (VAG) collected from pregnant women were inoculated in selective Lim broth. After overnight incubation, Lim broth were subcultured on GBSDA, on Granada agar (Biomerieux, Spain) and on Columbia blood agar (BA). To evaluate the 99 isolates of GBS (REF) from adult or neonatal infections (Belgian GBS reference laboratory collection) were cultured on GBSDA and Granada at their shelf of shelf life, and on BA. GBSDA and Granada were incubated anaerobically and BA aerobically + 7% CO₂, at 35°C, 24 to 48 h. Positive results were determined by Gram's stain and API 50 CHL. GBS was sub-cultured on GBSDA, Granada and BA for selective and differential growth of GBS, as the new Granada medium. The Group B Streptococcal Differential Agar (GBSDA), Becton Dickinson, is a modified Granada Medium with increased stability and selectivity. On these media, β-hemolytic strains of GBS produce red-orange to salmon colonies.

RESULTS

In September 2003, a total of 283 distal vaginal swabs were collected from pregnant women, using a swab with liquid Stuart media (Capon 199 C). In 18 hours, all orange colonies either on GBSDA or Granada were confirmed as GBS, 98.4 and 100 % respectively. On Blood agar, several sub-cultures were often necessary to isolate or even to find the suspected GBS (GBSDA, or GBSDA or GBP PCR Positive). All β-hemolytic colonies on blood agar were not confirmed as GBS.

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Clinical specimens and culture method

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REFERENCES


