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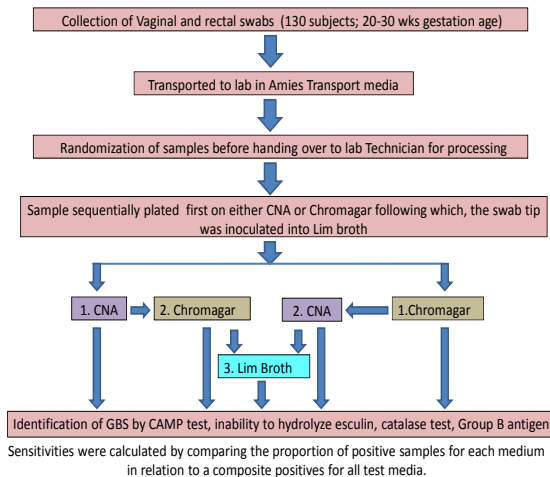
Introduction

Infections by Group B *Streptococcus* (GBS) is the significant cause of perinatal and neonatal infections. The implementation of maternal screening for GBS colonization followed by intrapartum antibiotic prophylaxis is effective in reducing GBS disease. Currently, the method recommended by Centers for Disease Control and Prevention (CDC) is considered to be the “gold-standard” method. This method recommends screening of all pregnant women for vaginal and rectal GBS colonization between 35 and 37 weeks of gestation by using a selective enrichment broth-Lim Broth (Todd Hewitt broth with Gentamicin and Nalidixic acid) followed by sub-culture to a blood agar plate. A high incidence of antimicrobial resistance found in industrializing countries can compromise the recovery of GBS from selective media.

Aim

In order to improve upon CDC recommendations, several alternative methods have been developed to improve the sensitivity of GBS detection. The aim of this study is to compare CHROMagar StrepB, Columbia CNA agar (CNA agar) and Lim broth for the isolation of GBS from swabs from pregnant women from South Africa.

Methods



Results

- Relative sensitivities of recovery of GBS from the vaginal swabs for individual media were: CNA agar-69.4%, CHROMagar StrepB-83.7% and Limbroth-79.6%.
- Relative sensitivities of recovery of GBS from the rectal swabs for individual media were: CNA agar-72.1%, CHROMagar StrepB-88.4% and Lim broth-27.9%.
- The sensitivity of recovery of GBS from rectal swabs following Lim Broth enrichment was significantly lower compared to CHROMagar StrepB ($p > 0.0001$) and CNA agar ($p = 0.002$).

Vaginal Swabs:

In sum, 49 GBS were isolated from 130 vaginal swabs at least on one medium

Media	GBS isolated	Sensitivity
CNA agar	34	69.4%
CHROMagar	41	83.7%
Lim Broth	39	79.6%

Table-1 Comparison of sensitivities among different media evaluated for vaginal swabs

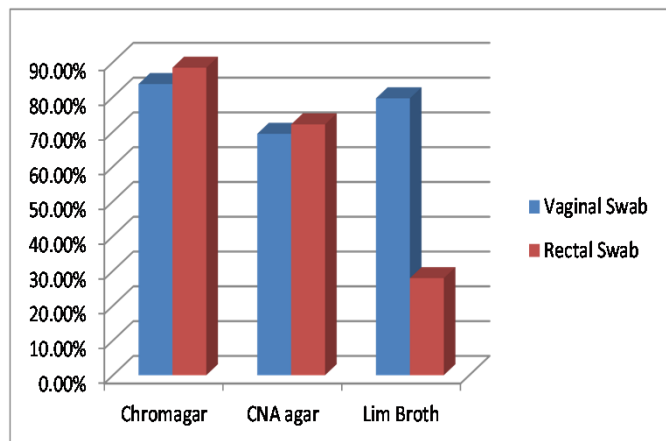
Rectal Swabs:

In sum, 43 GBS were isolated from 130 rectal swabs at least on one medium.

Media	GBS isolated	Sensitivity
CNA agar	31	72.1%
CHROMagar	38	88.4%
Lim Broth	12	27.9%

Table-2 Comparison of sensitivities among different media evaluated for rectal swabs

Figure 1: Sensitivities among different media evaluated for recovery of GBS from vaginal and rectal swabs.



Conclusions

- CHROMagar StrepB performed better than CNA agar and Lim broth enrichment for the recovery of GBS from both vaginal and rectal swabs.
- Lim broth enrichment is not suitable for the recovery of GBS from rectal swabs in countries with a high prevalence of gentamicin and nalidixic acid resistant flora.

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