



# Characteristics of *Streptococcus agalactiae* strains recovered from semen samples in Rio de Janeiro, Brazil

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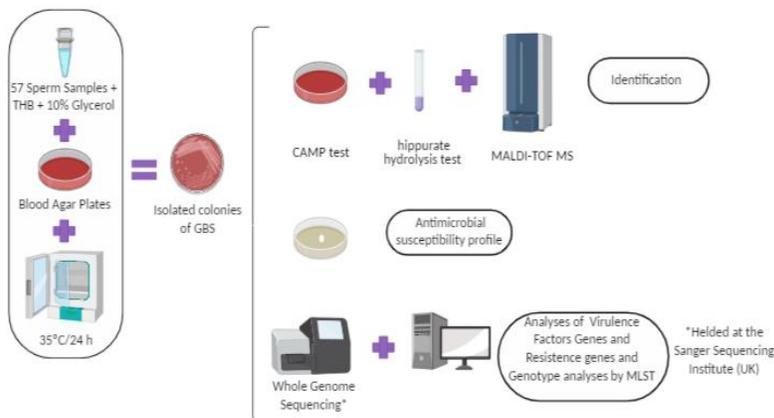
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## BACKGROUND AND AIMS

Group B *Streptococcus* (GBS) is commonly found in the anovaginal microbiota and as a cause of neonatal infections. Recent studies have also been highlighting GBS recovered from semen samples. However, whether GBS is capable of causing infections in the male reproductive tract, which can result in infertility or prostatitis, or even be transmitted via sexual intercourse are still underexplored subjects. To help clarify these aspects, GBS strains recovered from semen samples need to be fully characterized. The present study sought to elucidate characteristics of *S. agalactiae* strains recovered from semen samples in Rio de Janeiro, Brazil.

## MATERIAL & METHODS



## RESULTS

Strains belonged to capsular types: Ia, Ib, II, III, IV or V and were distributed into 4 clonal complexes: CC1, CC19, CC23 and CC498 (fig.1), and 4 singletons (ST10, ST17, ST26, ST103; one strain each). CC19 strains belonged to different serotypes depending on the ST: serotype II in ST28, serotype III in ST27, and serotype V in ST19 strains. Nearly 85% of the strains harbored *tetM* gene, which was commonly found in all serotypes and CC. Resistance to erythromycin and clindamycin due to *erm* genes, as well as quinolone resistance due to mutations in *parC* gene, were most common within CC19 strains, especially serotype V/ST19. CC19 was more frequent in 2018 when compared to 2017 (fig.2), especially due to increase in serotype II/ST28 strains. While CC1 and CC23 were similarly distributed regardless of age, CC19 was more common among those aged 20-40 years-old (fig.3).

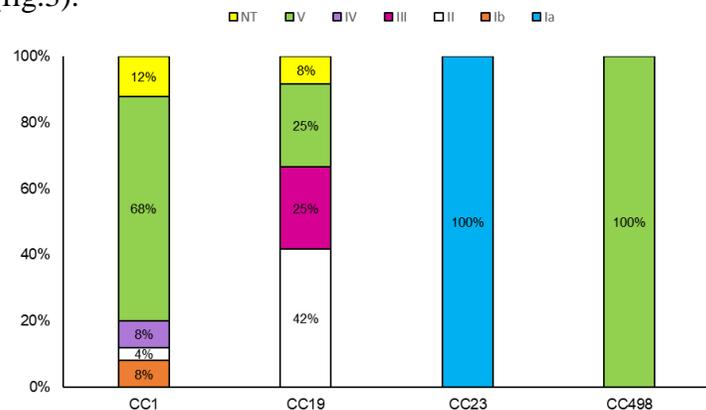


Fig. 1: Distribution of capsular types according to clonal complexes

## RESULTS

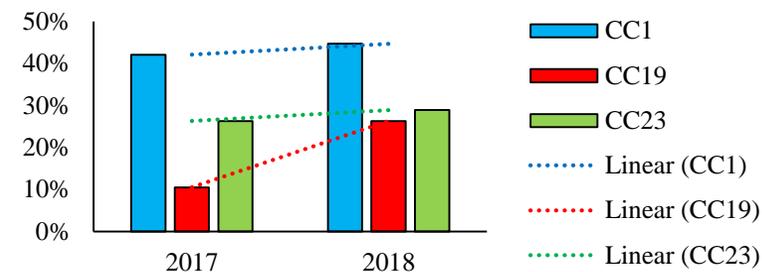


Fig. 2: Distribution of clonal complex according to years.

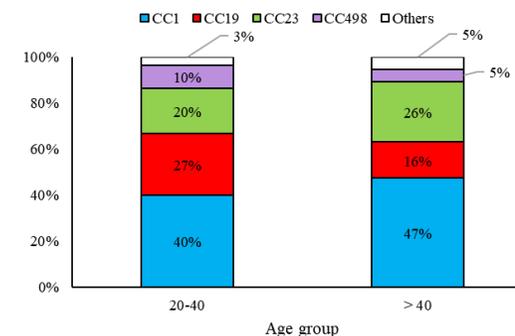


Fig. 3: Distribution of clonal complex according to age group.

## CONCLUSION

Overall, GBS from semen samples were shown to belong to serotypes and ST commonly found in other human sources, with the predominance of CC1/serotype V. However, an emerging trend of multidrug resistant CC19 was observed, especially among younger men, reinforcing the need for further studying GBS isolates from this still poorly investigated source.