

A Predictive Study of Adverse Pregnancy Outcomes in Group B Streptococcal Infection in the Third Trimester of Pregnancy

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Abstract

Objectives: The aim of this study was to comprehensively investigate the factors influencing the adverse pregnancy outcomes of GBS infection in late pregnancy and to assess the predictive value of serum CRP, PCT, IL-6, and IL-15 factors on them in clinical practice. To gain insight into the mechanism of GBS infection on the health of pregnant women and newborns, with a view to providing a scientific basis for the development of more accurate GBS screening strategies and prevention methods, and further safeguarding the health of pregnant women and newborns. **Methods:** 80 GBS screen-positive pregnant women who underwent antenatal checkups and were hospitalized for delivery in the hospital from April to December 2023 were prospectively included as the study group, as well as 80 randomly selected GBS screen-negative pregnant women as the control group. Serum CRP, PCT, IL-6 and IL-15 were collected and tested before delivery (before antibiotic treatment), and vaginal secretion samples were also collected. The study investigated the predictive value of the combined testing of CRP, PCT, IL-6, and IL-15 for pregnancy outcome in GBS-infected patients, as well as the relationship between vaginal secretions and adverse pregnancy outcomes and neonatal outcomes, with the aim of evaluating the risk level of pregnant women in a more comprehensive and precise manner, and to provide a reference for the development of screening strategies and research on prevention and treatment methods for GBS. **Results:** When exploring the predictive value of CRP, PCT, IL-6 and IL-15 and their combined assays for pregnancy outcome in patients with GBS infection, the results showed that the AUC of serum CRP was 0.781, the AUC of PCT was 0.698, the AUC of IL-6 was 0.828, the AUC of IL-15 was 0.653. whereas when these inflammatory factors were tested in combination, the AUC of serum CRP was predictive of adverse pregnancy outcome in GBS infected patients' adverse pregnancy outcomes reached an AUC of 0.931, with a sensitivity and specificity of 0.850 and 0.900, respectively, which was significantly higher than the results of the tests alone. **Conclusion:** This study not only provides a new perspective for the prevention and treatment of GBS infection during pregnancy, but also provides a scientific basis for further exploring the association between infectious diseases during pregnancy and pregnancy outcomes.

Keywords

Known as Streptococcus Agalactiae, Colonization, Predictive Value