

Article 8

Serum miR-34a-5p and miR-199a-3p as new biomarkers of neonatal sepsis

Abstract:

Background

Neonatal sepsis is a serious condition. Recent clinical studies have indicated that micro RNAs (miRNAs) are key players in the pathogenesis of sepsis, which could be used as biomarkers for this condition.

Patients and methods

A total of 90 neonates with sepsis and 90 healthy neonates were enrolled in this study. qRT-PCR was performed to measure the expression levels of serum miR-34a-5p and miR-199a-3p.

Results

miR-34a-5p and miR-199a-3p serum levels were significantly reduced in neonates with sepsis compared with those in healthy neonates ($P=0.006$ and $P=0.001$, respectively). Significant correlations of miR-34a-5p and miR-199a-3p with each of TLC, RDW, RBS, and C-reactive protein (CRP) as well as SNAP II were observed, indicating their associations with these variables of neonatal sepsis.

Conclusion

miR-34a-5p and miR-199a-3p may be useful as novel biomarkers in neonatal sepsis and may provide a new direction for its treatment.