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

Background

Neonatal sepsis is a serious condition. Recent clinical studies have indicated that microRNAs (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 the severity 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.