Study Confirms the Value of Calprotectin in Early Detection of Neonatal Infections and Sepsis

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Gentian is pleased to announce that results from a collaborative study conducted with the University Children's Hospital Regensburg (KUNO) and Hospital St. Hedwig of the Order of St. John (Regensburg, Germany) confirm the value of calprotectin in the early detection of bacterial infections and sepsis in neonates. The findings were presented at the Joint European Neonatal Societies (jENS) Congress in Belgrade.

Early detection of infections - a persistent challenge in neonatal care

Early identification of infection remains one of the greatest challenges in neonatal medicine. Conventional biomarkers such as C-reactive protein (CRP) and interleukin-6 (IL-6) are well established, yet each presents limitations in timing and specificity.

The oral presentation, titled “Serum calprotectin as a routine biochemical parameter to improve early diagnosis of neonatal infections,” highlighted calprotectin’s diagnostic accuracy and robustness across the first 60 hours after symptom onset.

The study demonstrated an early and sustained increase in calprotectin levels in infants with confirmed infections, detectable within the first 0–18 hours after symptom onset. IL-6 showed an early increase that declined after 18–30 hours. CRP levels rose later, typically after 18–30 hours. Calprotectin remained elevated and stable throughout the 60-hour observation period.

These findings confirm that calprotectin is a promising early biomarker that provides substantial diagnostic value when combined with IL-6 or CRP, enhancing diagnostic performance both in the early and later phases of infection.

Clinical implications

Investigators concluded that serum calprotectin, measured with the Gentian GCAL® assay, supports multimodal diagnostic strategies and antibiotic stewardship. The assay requires only a minimal sample volume and enables fully automated laboratory implementation, making it a practical addition to routine clinical workflows.