

UTILITY OF NEUTROPHILIC CD64 IN DIAGNOSIS OF BACTERIAL INFECTION IN CHILDREN WITH DECOMPENSATED CHRONIC LIVER DISEASE

Rungmei Marak

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Poster

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Neutrophilic CD64 demonstrates superior diagnostic accuracy compared to procalcitonin for identifying bacterial infections in children with decompensated chronic liver disease, with 100% specificity when combined with procalcitonin and total leucocyte count.

KEY POINTS

- In a prospective study of 107 children with decompensated chronic liver disease, 72.9% had bacterial infections, most commonly ascitic fluid infection (n=37), pneumonia (n=24), and urinary tract infection (n=15).
- Neutrophilic CD64 at a cut-off of 51% showed sensitivity of 79.5%, specificity of 82.8%, and accuracy of 80.4%, outperforming procalcitonin (sensitivity 76.9%, specificity 62.1%, accuracy 72.9%) and total leucocyte count.
- Both neutrophilic CD64 and procalcitonin levels correlated with infection severity, with highest levels in severe sepsis (88% and 1.98 ng/mL respectively) compared to infection alone or no infection.
- The combination of all three biomarkers (neutrophilic CD64, procalcitonin, and total leucocyte count) achieved 100% specificity for infection diagnosis, though with reduced sensitivity of 23.1%.
- Neutrophilic CD64 declined faster than procalcitonin with infection resolution, with only 10% versus 43% remaining elevated after clinical resolution, suggesting utility for monitoring treatment response.

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