

Summary of publication

Primary Care • HemoCue® WBC

Key words:

WBC count | Serum C-reactive protein (CRP) | Children

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Summary of publication

Discrepancy between Total White Blood Cell Counts and Serum C-reactive Protein Levels in Febrile Children

V. Peltola, et al. (2007)



Total white blood cell (WBC) count and serum C-reactive protein (CRP) are used as inflammatory markers in children with fever. An increase in only one of the markers is often seen when simultaneous measurements of WBC and CRP are used in everyday clinical practice.

The purpose of the study was to analyze the discrepancy between WBCs and CRP levels in children with fever, and the connection of discordant or concordantly high values in these markers with severe bacterial-type diseases. The medical records of children (1 month to 16 years of age) with fever were retrospectively reviewed from a 2-year period. WBC $\geq 15 \times 10^9/L$ and/or CRP ≥ 80 mg/L from children with fever as well as of children with lower values in both these parameters, WBC and CRP were discordant in 556 children and

concordantly high in 194 children. A severe bacterial disease was presumed in 57 % of children with concordantly high WBC and CRP, in 20 % of those with discordant values, and in 5 % of those with low levels of these markers ($p < 0.001$). Non-streptococcal tonsillitis was the most common viral infection associated with elevated WBC and CRP.

Conclusion:

WBC and CRP are commonly discrepant in children with fever. Measuring both markers substantially increases the detection rate of bacterial infections.

Why choose the HemoCue® WBC/WBC DIFF System?

The HemoCue WBC system provides WBC count within three minutes, and the HemoCue WBC DIFF system provides WBC count and a 5-part differential count within five minutes.

The HemoCue WBC system is a point-of-care system that can be used on either capillary or venous blood samples. The system only requires 10 μL (1 drop) of whole blood.

HemoCue® always provides:

- Lab accurate results
- Easy to use point-of-care system
- No calibration or instrument adjustment needed



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HemoCue has been a leader in point-of-care medical diagnostics for over 30 years. We specialize in giving healthcare providers lab-quality accuracy with results comparable to that of a clinical lab.

