

EP03.08

POCT WBC reduces antibiotic prescription - a prospective study

Luigi Cioffi, R Limauro, R Sassi, D del Gaizo

Federazione Italiana Medici Pediatri, Naples, Italy

Corresponding author: Miss Annika Eriksson, HemoCue AB, Scientific Affairs, Ängelholm, Sweden. E-mail: aer@hemocue.se

Background & Aim: The aim of this study was to test the hypothesis that usage of a point-of-care WBC count as a complement to the clinical investigation would significantly decrease the prescription of antibiotics for children with flu and flu-like symptoms. The definition for flu or flu-like symptoms was fever, coughing, sneezing, muscle pain, runny mucus or purulent mucous lasting less than ten days, a finding of hyperemia of the pharynx, and/or eardrums and normal breath sounds.

Method: In the study, children were randomized into 2 groups; one using the point-of-care WBC count as part of the clinical investigation, and one prescribing antibiotics according to normal procedure with delayed antibiotic prescription with at least 3 days of fever. WBC count of 15,000/mm³ was used as cut off for antibiotic prescription in the group where WBC was measured.

Results: 792 patients were randomized into 2 well-balanced groups. In the first group (n= 437) WBC was measured point-of-care (WBC group) as part of the clinical investigation. 56 patients had a WBC >15,000/mm³. They all received antibiotics. The remaining 381 children were treated symptomatically. At a follow-up visit after 48 h, additional 44 children received antibiotics. In the second group, the control group (n= 355), antibiotics was prescribed according to normal procedures using delayed prescription. The reduction of antibiotic prescription was 77% where the WBC count was included compared to the control group. No influence could be observed between the two groups in recovery, complications or other medical outcome.

Conclusions: By adding a point-of-care WBC count as part of the clinical investigation on children with flu and flu-like symptoms, the prescription of antibiotics in a pediatric setting could be significantly reduced (77%). Reduction of inappropriate use of antibiotics is important in avoiding antibiotic resistance.