

Summary of publication

Primary Care • HemoCue® WBC

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Luigi Cioffi, et al. Decreased Antibiotic Prescription in an Italian Pediatric Population with Nonspecific and Persistent Upper Respiratory Tract Infections by Use of a Point-of-Care White Blood Cell Count, in Addition to Antibiotic Delayed Prescription Strategy. *Global Pediatric Health*, Volume 3: 1-6, 2016.

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Decreased Antibiotic Prescription in an Italian Pediatric Population with Nonspecific and Persistent Upper Respiratory Tract Infections by Use of a Point-of-Care White Blood Cell Count, in Addition to Antibiotic Delayed Prescription Strategy.

Luigi Cioffi, MD, Raffaele Limauro, MD, Roberto Sassi, MD, Antonio Boccazzi, MD, Donatella del Gaizo, MD, PhD. (2016)

The aim of this study was to test, in delayed antibiotic strategy, if the usages of a point-of-care leukocyte count would significantly decrease the prescription rate of antibiotics for children with nonspecific upper respiratory tract infections. A prospective clinical trial was performed in 23 primary care pediatric doctors' offices on children with nonspecific upper respiratory tract infection with fever for at least 48 hours. The children were randomized into 2 groups: one using a point-of-care white blood cell (WBC) count as guidance and the other prescribing antibiotics to all children, according to delayed antibiotics prescription strategy. A total of 792 patients participated. In the WBC group (n = 437), 56 patients had WBC >15 000/mm³ and received antibiotics. At follow-up, an additional 44 children received antibiotics. In the control group (n = 355), antibiotics were prescribed to all children. The reduction of antibiotic usage

was 77% between the groups. The decrease in antibiotic usage gave no influence on recovery, complications, or other medical outcome.

Conclusion

Reduction of inappropriate use of antibiotics is important in avoiding antibiotic resistance. This study in pediatric primary care has highlighted the inappropriateness of antibiotic therapy in patients with persistent URTIs. By adding a point-of-care WBC count as a part of the clinical investigation on children having fever and symptoms for at least 48 hours, the prescription of antibiotics in a pediatric setting could be significantly reduced. The decrease in antibiotic usage gave no influence on recovery, complications, or other medical outcomes.

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

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