

Fever Under 3 Months: Is It NICE to Continue?

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Dear Editor,

The majority of fever $>38^{\circ}$ are due to viral illness. However invasive bacterial infection can occur. NICE published a guideline for the management of fever in those under five¹. We set out to ascertain the cause and pattern of infections in infants aged less than three months and to examine our compliance with the guideline.

The medical records of infants aged less than 3 months who presented with fever more than 38°C from January to December 2018 were reviewed. Patients were divided into two groups for statistical analysis; those aged less than 1 month (group i) and aged between 1 and 3 months (group ii). Investigation was performed where indicated, as per guideline.

We examined 43 records [7 (16.27%) (group i) and 36 (83.7%) group ii], mean (SD) age 49.56 (18.22) days. Mean (SD) serum WCC, CRP and neutrophil were 11.45 (5.05) $10^9/\text{L}$, 17.04 (21.25) mg/L and 5.58 (3.47) $10^9/\text{L}$, respectively. Neutrophil and CRP values were above the reference range in one of four infants (25%) with UTI. Moreover, serum WCC, neutrophil and CRP values did not differ between infants with x-ray changes and those with normal chest x-ray (p value 0.32).

Four viral pathogens were isolated in CSF by PCR [enterovirus, HHV6 and parechovirus (two)] [all group ii except HHV6]. No bacterial pathogen was isolated by CSF PCR, CSF culture or blood culture, however meningococcal B was detected by serum PCR in one infant, aged 7 weeks. Consolidation was reported in three infants (group ii). Bacterial uropathogens were isolated in 4 urine samples (one group i and three group ii). Rotavirus was isolated in two stool samples (group ii) and enterovirus in one (group i).

In conclusion, our compliance with NICE guideline is satisfactory. In febrile infants aged less than three months, normal serum WCC, neutrophil or CRP value does not exclude bacterial infection. In this cohort of febrile infants aged less than 3 months, approximately, one in 14 had consolidation and one in eleven experienced UTI. Moreover, one infant had meningococcal B septicaemia. Nevertheless, viral pathogens were reported in three stool and four CSF samples. These results highlight the importance of following the current NICE guideline, in order to avoid serious bacterial infection.

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References:

1) National Institute for Health and Excellence (NICE): Fever in under 5s: assessment and initial management (CG160);May 2013.