

**THE INCLUSION OF AN ELEVATED PEAK C-REACTIVE PROTEIN IN THE CASE
DEFINITION OF LATE NEONATAL SEPSIS IDENTIFIES A SIGNIFICANT NUMBER OF
CULTURE NEGATIVE SEPTIC EPISODES**

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Background and aims: For the purposes of infection surveillance, late-neonatal septic episodes are usually defined as a positive culture from a normally sterile site occurring 72 hours after birth for which a clinician has prescribed five days of antibiotics¹. Culture negative septic episodes are, however, not recorded and their contribution to the sepsis burden is unknown.

Methods: Over a six month period, all episodes of possible late sepsis on a Level 3 NICU were prospectively identified and classified according to peak C-reactive protein levels, blood and other culture results. Repeat episodes were identified and excluded.

Results: 247 unique episodes were identified. Of these, 18 episodes had a positive culture and elevated CRP (Group B positive *Streptococcus* (1), *Klebsiella pneumonia* (2), coagulase negative *Staphylococci* (15)). In 51 episodes, there was an elevated CRP but negative cultures. Of these, 36 were considered to be highly clinically suspicious of sepsis and 11, were considered to result from non-infected causes (e.g. immunisation). 15 of the 22 with positive blood cultures without rise in CRP were treated by the attending clinician with at least 5 days of antibiotics (all coagulase negative *Staphylococci*).

	Blood Culture Positive	Blood Culture Negative
CRP \geq 10	18	51
CRP < 10	22	156

[Table 1]

Conclusions: A rise in CRP during a septic episode allowed the identification of additional clinically significant culture negative septic episodes.

(1) Vergnano et al. Arch Dis Child 2010 96: F9-F14