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INTERLEUKIN-6 AS A DIAGNOSTIC TOOL IN NEONATAL SEPSIS

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Background and aim: Early and late onset sepsis increases morbi-mortality, especially in the most premature-born infants. An early diagnosis of such infections is of importance to decrease the morbidity thanks to a rapid treatment onset. As interleukine 6 has a rapid kinetic, it could be an early diagnostic tool of neonatal sepsis, enabling to initiate antibacterial treatment rapidly.

Method: We conducted a prospective cohort study of premature infants born from 01/01/2010 to 30/04/2010. Interleukin 6 was measured as soon as early or late onset sepsis was suspected.

We either defined neonatal sepsis as confirmed when there was a bacteraemia, or as suspected if the infant presented with clinical sepsis and high C-reactive protein. ROC curves were performed to determine the threshold best predicting the neonatal infection.

Results: 100 premature infants were included. Gestational age was (median [q1;q3]): 33 [30;35], APGAR at 5 minutes was 9 [7-9]. The interleukine-6 threshold for early onset sepsis was 250 pg/ml (AUC=0.926; sensitivity=87.7%; specificity= 90.9%), and 200 pg/mL for late onset sepsis (AUC=0.966; sensitivity=95.2%; specificity= 91.1%). Interleukine-6 predictive values for infection were not altered by general neonatal characteristics.

Conclusion: Interleukine-6 can predict early or late onset sepsis in premature-born infants. As its kinetic is rapid it could allow early antibiotic treatment onset so as to reduce morbidity due to these infections in this fragile population.