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Immunologic and infectious consequences of immediate versus delayed umbilical cord clamping in premature infants: a prospective, randomized, controlled study.

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AIM: To evaluate the immunologic and infectious consequences of delayed versus immediate cord clamping in premature infants (<35 weeks) during the neonatal period. METHODS: This was a prospective, masked, randomized, controlled, single-center study. Prior to delivery 35 infants were randomly assigned to immediate cord clamping (ICC) at 5-10 s and 30 infants to delayed cord clamping (DCC), at 30-45 s (14 and 15 infants in each group were <1500 g, respectively). RESULTS: Neonatal characteristics of the ICC and DCC groups were comparable. There was no significant difference between the ICC and DCC groups in the complement or in the immunoglobulin levels. All were within the normal range for age. All infectious parameters (events of sepsis or "rule-out sepsis", days of antibiotic therapy, and number of antibiotic courses during hospitalization and infections within the first month of life in cases of earlier discharge) were comparable in both groups. Similar results were found in the subgroup of infants <1500 g. Gender analysis showed only modest differences. CONCLUSIONS: Delayed compared to immediate cord clamping did not affect the immunologic or the infectious status of infants born at <35 weeks during the neonatal period.