HUMORAL IMMUNE RESPONSE TO MEASLES, VARICELLA-ZOSTER AND TETANUS VACCINATION IN PRETERM INFANTS

C.F. Schlindwein, M.C.A.A. Perin, M.I. de Moraes-Pinto, R. Simão, A.F.M.A. Mimica, L.Y. Weckx, A.L. Goulart, A.M.N. dos Santos

Department of Pediatrics/ Neonatal Division of Medicine, Federal University of São Paulo (UNIFESP), São Paulo, Brazil

Background and aims: Antibody response may be lower in preterm infants. This study aimed to compare the immune response to vaccination against measles, varicella and tetanus in preterm and term infants and to analyze factors associated with antibody level.

Methods: Two prospective cohorts of infants aged 12-18 months; Group 1: Very low birth-weight preterm infants; Group 2: Term infants. Antibodies were measured before and after vaccination against measles at 12mo and tetanus booster and varicella at 15mo. Comparisons were performed by t-test or χ^2 . Factors associated with antibody levels were analyzed by linear regression, considering $p < 0.05$ significant.

Results: Group 1, 65 infants (BW: 1184±214g; GA: 30±2.2wks) and Group 2, 56 (BW: 3245±285g; GA: 39±1wks) were similar regarding proportion of infants with protective antibody levels against measles (>0.12 IU/mL), varicella (≥ 0.1 IU/mL) and tetanus (≥ 0.1 IU/mL). Antibody levels before and after vaccination were similar in both groups for measles (0.026 vs. 0.027; 2.394 vs. 2.412), varicella (0.044 vs. 0.05; 0.353 vs. 0.317) and tetanus (0.147 vs. 0.205; 1.997 vs. 1.740). By linear regression, being premature decreased tetanus antibody titers in -0.106 ($p=0.023$) and an increase in 1wk in GA raised tetanus antibody titers in 0.012 at 15mo ($p=0.032$). Regarding to varicella, an increase in 1wk in GA raised antibody titers in 0.015 at 15mo ($p=0.030$).

Conclusions: Humoral immune responses were similar in both groups. Greater GA was associated with increased antibody levels against tetanus and varicella.

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