Effect of probiotics on weight gain in very low birth weight neonates (VLBW)

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Background: An adequate establishment of the intestinal flora after birth is related to development of gut, motility maturation and better weight gain. Feeding intolerance is a major issue in preterm infants, resulting in predisposition to serious complications especially poor weight gain. The objective of this trial was to determine the efficacy of probiotics on feed tolerance and the speed of weight gain in very low birth-weight infants.

Methods: This study was a double-blinded randomized control trial. We collected data in a neonatal intensive care unit in Qaem hospital, Mashhad, Iran. 40 newborns with a birth weight of 750-1499 g on enteral feeds were considered for the study. Probiotic group (n=20) received a multicomponent probiotic formulation from the time of initiation of enteral feeds till 14 days and the control group (n=20) received only placebo. We compared the time to reach full enteral feeds and weight gaining. Two groups were matched on birth weight (p=0.814), baseline weight (0.08), size of baseline nutrition (p=0/236), age of birth (p=0.916), Apgar score (p=0.541), delivery method (0.091).

Results: The average weight changes in probiotic group was (130.38±80) and in placebo group was (137.5±73.5), (p=0.094). The average nutrition changes in probiotics group was (60.25±31.42) and in placebo group was (31.19±25.35), (p=0.001). The time average of hospitalization in probiotics group was (21.2±11.41) and in placebo group was (19.1±6.79), (p=0.474).

Conclusion: According to our findings, probiotic supplementation does not seem to result in significant weight gaining in preterm (VLBW) infants.

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