

## عنوان مقاله:

Effect of Zinc Supplement Provision on Growth and Neurodevelopmental Parameters in Preterm Neonates

## محل انتشار:

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## خلاصه مقاله:

Background: Zinc deficiency often occurs in preterm and low-birth-weight neonates. The present study aimed to assess the effect of zinc supplement provision on increased body weight, body length, and head circumference, as well as neurodevelopmental parameters of preterm neonates. Methods: A true experimental study with a double-blind, randomized clinical trial (RCT) was conducted involving 30 preterm neonates with 30-34 weeks of gestational age who were assigned to two groups, i.e., zinc supplements and placebo, and followed until the three months of corrected age. Results: The mean score of zinc level in all subjects was  $34.47 \pm 12.00$   $\mu\text{g/dL}$ . There were significant differences in serum zinc level at birth compared to the corrected age of three months, both in the supplement group and placebo ( $P < 0.001$ , each). Zinc level showed a significant positive correlation with body weight, length, and head circumference at the corrected age of three months ( $r = 0.469$ ,  $P = 0.009$ ;  $r = 0.428$ ,  $P = 0.018$ ;  $r = 0.549$ ,  $P = 0.002$ ). Zinc levels had a significant, positive correlation with BINS at the age of 3-4 months ( $r = 0.594$ ;  $P = 0.001$ ), IGF-1 ( $r = 0.496$ ;  $P < 0.001$ ), body weight ( $r = 0.469$ ;  $P = 0.009$ ), length ( $r = 0.428$ ;  $P = 0.018$ ), and head circumference ( $r = 0.549$ ;  $P = 0.002$ ) at corrected age of three months. Conclusion: The provision of zinc supplements could positively affect the growth of preterm neonates in the form of body weight, body length, head circumference, IGF-1, and neurodevelopmental improvements.

## کلمات کلیدی:

Anthropometry, IGF-1, neurodevelopment, preterm neonate, zinc

## لینک ثابت مقاله در پایگاه سیویلیکا:

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