



BIOELECTRICAL IMPEDANCE IN PREMATURE NEWBORNS AND ITS RELATIONSHIP WITH DIET THERAPY IN A NEONATAL INTENSIVE CARE UNIT

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ABSTRACT

The growth and nutritional status of preterm infants are still monitored by anthropometric measurements, and body composition measurements are not part of their care routine. To estimate resistance (R), reactance (Xc) and phase angle (PA) values among moderate preterm infants and their variation according to neonatal and maternal characteristics and nutritional intake. This was a cohort that evaluated 43 moderate preterm infants using bioelectrical impedance analysis (BIA). The study variables included R, Xc and PA measurements, in addition to classification of nutritional intake. The mean R was 602.0+118.2 Ω , Xc was 57.2 Ω (IIQ = 42.6-65.2) and PA was 522° (IIQ = 4.1-6.6). Lower R values were found in the presence of risky pregnancy (532.2+111.9 Ω vs 650.9+97.9 Ω , p<0.001) and lower Xc values, in the presence of harmful maternal lifestyle habits at both the first (p=0.01) and second assessments (p=0.01). Eight preterm infants were considered to have insufficient nutritional intake (23.5%); 17, sufficient (50.0%) and 9, partially sufficient

(26.5%). There was less R among preterm infants with insufficient nutritional intake (p < 0.001). There was also an increase in R between the first and second weeks of assessment among preterm infants with sufficient nutritional intake. The BIA measurements were within the range of values reported in other studies. There was an association between full diet and adequate nutritional intake with higher R values, and a lower Xc value was associated with the presence of risky pregnancy and harmful maternal lifestyle.

BIOGRAPHY

Catiuscie Cabreira da Silva Tortorella has completed his PHD in 2023 from the Postgraduate Program in Child and Adolescent Health at Federal University of Paraná. He has been a professor of the nutrition course at the University of Central West Parana, Brazil since 2014. Field tutor for the Multidisciplinary Residency in Family Health since 2015. He has been serving as an editorial board member of several reputed journal.



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