Abstract

Introduction: Parenteral administration of nutrients to sustain newborns’ growth represents an important therapeutic challenge. Objective: To describe parenteral nutrition (PN) practices in a tertiary hospital and evaluate postnatal growth in preterm infants.

Material and methods: Observational retrospective study over 3 months. Data on infants born or admitted to the Neonatal Department and starting PN were collected. Demographics, anthropometric data, daily caloric, protein intake data and PN components used were collected. Growth velocity was characterized by the average daily weight gain and compared to intrauterine growth.

Results: 68 preterm infants started PN during the study period. Most infants (65%) were born by caesarean and mean gestational age was 33 weeks. Twenty five percent of newborns did not regain birth weight. The remaining 75% regained birth weight on the 3rd day of PN and average daily weight gain was 16 g/kg/d, ranging between 12 and 22 g/kg/d. Although weight gain approximated intrauterine rate, most infants born <30 weeks gestation did not achieve median birth weight of the reference population.

Early aggressive PN was administered with an average of 3, 11 and 3 g/Kg/d of proteins, carbohydrates and lipids respectively, reaching a maximum on the 4th day of 4, 18, 4 g/kg/d, respectively. Discussion: Aggressive PN is used in the hospital setting. The preterm infants reached birth weight earlier and had a greater velocity of growth than in other clinical trials and similar to intrauterine.

Keywords

Parenteral nutrition, Preterm infants, Growth.