We present a series of three cases of Vitamin D deficiency and its associated cardiovascular complications.

Case 1: This 6 month girl of African descent presented to the emergency department in cardiac failure. The echocardiogram showed grossly dilated heart with impaired function. On evaluation she was found to have vitamin D deficiency and responded well to calcium, vitamin D, diuretics and digoxin.

Case 2: This two year girl who had been treated for dilated cardiomyopathy secondary to vitamin D deficiency was brought to the emergency department in cardiac arrest. Her post-mortem examination revealed grossly dilated cardiomyopathy with extensive calcification of the conduction pathways.

Case 3: This 15 year old boy of African descent was being evaluated for genu valgum. His evaluation revealed hypocalcemia, vitamin D deficiency and a prolonged QT interval. Echocardiogram was unremarkable. He was started on Vitamin D and calcium. His QT interval normalised.

Conclusions: Dilated cardiomyopathy secondary to vitamin D deficiency can definitely be prevented and does have a better prognosis than idiopathic dilated cardiomyopathy. Although the risk of Vitamin D deficiency is greater in individuals with increased skin pigmentation, recently there has been a resurgence of vitamin D deficiency in the developed world, and this has become a global problem.

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NUTRITIONAL DEFICIT AMONG EXTREMELY LOW BIRTH WEIGHT INFANTS IS EVITABLE

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Postnatal malnutrition and growth retardation were shown as inevitable consequence of current recommendations in preterm infants.

In 2006, we modified our nutritional guideline:

-Intravenous protein and lipids started at higher rates and increased quicker.

-Human milk fortified with EOPROTINE 4% and LIQUIGENE 4 mL/d when enteral feeding reach 100 mL/kg.d

-Introduction of preterm formula fortified with EOPROTINE 2% for up to 50% of the volume fed if growth was insufficient.

Objectives: To compare energy and protein cumulative deficits over the first seven weeks of life.

Method: Optimal energy and protein intakes were set at 120Cal/kg.d and 3g/kg.d respectively and used to calculate positive cumulative deficits. We compared 2 groups of ELBW infants below 28 weeks born in 2005 and 2009 who stayed at least 7 weeks in our unit. Results are reported as median (Q1, Q3). Mann-Whitney tests were performed for each criteria.

Results: Groups were not different for GA (p=0.277) and BW (p=0.106). At the end of the 1st and the 7th week, energy and protein deficit were significantly reduced in the 2009 group.

Energy (Cal/kg): W1:419(378, 450) versus 375(327, 421), p=0.002; W7: 983(724, 1355) versus 48(-270, 484), p< 0.01

Protein (g/kg): W1: 5.77(5.06, 7.72) versus -0.19(-1.4, 0.65), p< 0.01 ; W7 : 1.14(-6.55, 6.68) versus -18.72(-27, -12.62), p< 0.01

Conclusion: Higher parenteral intakes and close attention to enteral feeding allowed a reduction of nutritional deficit. Nonetheless, potential clinical effect had to be studied.

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IMPROVED CATCH UP GROWTH IN MALE PRETERM AGA INFANTS WITH INCREASED EARLY PROTEIN AND MINERAL INTAKE

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Background: Optimal protein intake improves weight gain whereas sufficient intake of calcium (Ca) and Phosphate (P) is necessary for bone mineralization and gain in length.