

HIV reference center in El Salvador (CENID). Dyslipidemias and nutritional status were defined according to international references. Logistic regression models were used for the identification of associated risk factors.

Results: Cholesterol results were obtained in 301 patients, triglycerides in 262 and glucose in 295. Mean age was 9.3 years (3.7 SD) and sex distribution even. 26.3% of the children were identified as being stunted. 2.9% as being wasted. 8% as being overweight and 2.4% as being obese. Hypertriglyceridemia was diagnosed in 50.4% of the children, hypercholesterolemia in 11.2% and hyperglycemia in 2.1%. Associated factors with hypertriglyceridemia were increasing Body Mass Index for Age Z Score (BMAZ) [odds ratios (95% CI): 1.36 (1.03, 1.80)] and being treated with protease inhibitors [odds ratios (95% CI): 7.77 (4.00, 15.07)]. This last factor was the only one found to be associated with hypercholesterolemia [odds ratios (95% CI): 2.72, 11.92]. No significant association was found with age, gender, duration of treatment, or being overweight or obese.

Conclusions: More than 50% of the HIV infected children analyzed present hypertriglyceridemia. Treatment with protease inhibitors seems to be the most important risk factor although nutrition may also be playing an important role. Further research on the subject is encouraged in order to understand the etiology of the problem and to propose effective treatment and prevention strategies for its management.

Key Words: Hypertriglyceridemia, hypercholesterolemia, HIV, children and adolescents,

problems. Some studies with children have reported an inverse association between dietary calcium intake and adiposity.

Objectives: To analyze the association between nutritional factors and body fat percentage (%BF) in pre-school children.

Method/Design: This study was a cross-sectional analysis. It was observed a total of 240 children (131 boys) aged 3-7y. In all children, anthropometric measurements were recorded (weight, height, biceps, triceps, subscapular and suprailiac skinfolds). Children's food intake was reported in a 3-day food record. The %BF was calculated using Westrate and Durenberg equation. Calcium intake was expressed as the calcium-to-protein ratio. Data was analyzed separately for girls and boys, and linear regression analysis was used to estimate the association between calcium intake and %BF adjusting for energy intake and potential confounders.

Results: The prevalence of overweight/obesity was 45.4% (boys: 40.5% and girls: 51.4%, $P>0.05$). Participants had a %BF mean of $20.1\pm 5.5\%$ (boys: $17.9\pm 4.9\%$ and girls: $22.9\pm 4.7\%$, $P<0.05$), a calcium intake mean of $61.7\pm 376.3\text{mg}$ (boys: $884.2\pm 382.8\text{mg}$ and girls: $833.1\pm 367.9\text{mg}$, $P>0.05$) and a calcium-to-protein ratio mean of $10.8\pm 4.4\text{mg}$ (boys: 10.9 ± 4.4 and girls: 10.8 ± 4.4 , $P>0.05$). Calcium-to-protein ratio was significantly associated with %BF in boys, even after adjusting for age, energy intake, dietary fiber, and body mass index (boys: $\beta = -0.128$, $P<0.05$ and girls: $\beta = 0.111$, $P>0.05$).

Conclusions: In our sample, calcium intake seems to be inversely related to %BF in boys. Further studies are needed to test the effects of dietary calcium intake on body fat mass in pre-school children.

Key Words: dietary calcium intake; pre-school children; body fat mass.

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Association between calcium intake and body fat among pre-school Portuguese children

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Introduction: Obesity is the condition in which abnormally large body fat mass accumulates and causes a broad range of health

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Immuno-modulating properties of β -glucans from different sources on THP-1 macrophages

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Introduction: β -Glucans are one of the main components in the cell walls of cereals, plants, fungi and yeasts. Most β -glucans are considered as nondigestible carbohydrates and as Pathogen-Associated Molecular Patterns (PAMPs). These PAMPs can be recognized by Pattern Recognition Receptors (PRRs), for instance Toll-Like Receptors (TLRs) on innate immune cells like macrophages, neutrophils and natural killer cells. The immunomodulating effects of β -glucans on human and animals are mediated via the innate immune system resulting in up-regulation of cytokine genes and stimulation of humoral and cell mediated immunity.

Objectives: In this study, we investigated immunomodulating