

Ultrasonographic and by computed tomography measurements of adipose tissue and metabolic changes associated with obesity in children Mediciones ultrasonograficas y de tomografía computada de adiposidad y alteraciones metabolicas asociadas a obesidad en ni

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Introduction. Childhood obesity is increasing over the world with serious health consequences. Intraabdominal fat is associated to some metabolic alterations in obesity. It does not exist a standard imaging method to measure adipose tissue in children. Objectives: In obese children to study the association between insulinemia and subcutaneous or intraabdominal fat evaluated by ultrasonographic (US) or computed tomography (CT). Subjects and Methods. 37 obese (BMI \geq p95) prepubertal obese children (ages from 6 to 12 years) were assessed using anthropometric, US and CT for fat areas and linear intrabdominal segments measurements. Laboratory techniques were also performed: insulinemia and glycemia. Results. We found good correlations between US and TC intra-abdominal adipose tissue measurements ($r= 0,79$; $p< 0,001$). US ($r=0.56$) and CT ($r=0.53$) visceral fat assessment had better correlations with insulinemia than anthropometric measurements (BMI, $r= 0,33$; waist, $r= 0.42$). Conclusions. US and