

# Ultrasound measurements of intra-abdominal adiposity and factors associated with cardiovascular risk in obese children Mediciones de adiposidad intraabdominal por ultrasonido y factores asociados con riesgo cardiovascular en niños obesos

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**Background:** Cardiovascular risk factors are commonly present in obese children. **Aim:** To evaluate the association among radiological measurements of intra-abdominal adipose tissue, and cardiovascular risk factors, in prepuberal obese children. **Patients and Methods:** We evaluated 30 obese (body mass index  $\geq$  p95) children aged 6 to 12 years (15 males). Anthropometry and blood pressure were measured. Subcutaneous and intra-abdominal fat thickness and fat area were measured by ultrasound (US) and computed tomography. Serum insulin, glucose and lipid profile were measured in a fasting blood sample. Homeostasis model assessment (HOMA) was calculated as an index of insulin resistance. **Results:** There was a significant correlation between US intra-abdominal fat thickness and HOMA ( $r = 0.47$ ,  $p < 0.01$ ), serum triglycerides ( $r = 0.46$ ,  $p < 0.05$ ) and with positive criteria for metabolic syndrome ( $r = 0.66$ ,  $p < 0.01$ ). A receiver operating curve (ROC) analysis showed that, above a cut-off of 45 mm for i