

## Visceral and subcutaneous fat

*Gordura visceral e subcutânea*

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Obesity is currently a public health problem, presenting prevalent exponential growth in all age groups, particularly in children and adolescents.

Accumulation of visceral fat is associated with increased cardiovascular risk, metabolic syndrome (hypertension, dyslipidemia, type II diabetes) and insulin resistance. There is a greater correlation than that with body mass index and abdominal circumference measurement. In obese patients, it is difficult to estimate the amount of visceral and subcutaneous fat.

Methods utilized to evaluate visceral fat include bioelectrical impedance analysis, ultrasonography (US), computed tomography (CT), magnetic resonance imaging (MRI) and body fat densitometry (DEXA).

CT and DEXA have good sensitivity and specificity, but involve irradiation and their costs are high than the cost of US. MRI is excellent, but it is also more expensive than US. Bioelectrical impedance analysis is not a dominion of radiology and presents interferences, therefore US is the current method of choice.

Additionally, considering that steatosis is associated with obesity, the liver echogenicity should be evaluated. As the basic cause of steatosis is treated, the disease becomes undetectable at ultrasonography within three to four weeks.

The value of the method is correlated with clinical and laboratory parameters, with the patients' follow-up, evaluation of weight loss, and muscle mass loss.

The sonographic measurements must be always standardized and performed in similar regions for the purposes of reproducibility and errors reduction. Physicians trained in ultrasonography can produce reliable and reproducible results.

Several studies in the literature, including the one published in the present issue of **Radiologia Brasileira<sup>(1)</sup>**, have demonstrated the accuracy and reproducibility of the method.

The utilization of such evaluation is more of an academic line than in the clinical practice. In the clinical practice, one evaluates the weight loss associated with increased practice of exercises and improvement in laboratory tests results.

### REFERENCE

1. Sakuno T, Tomita LM, Tomita CM, et al. Avaliação ultrassonográfica da gordura visceral e subcutânea em crianças obesas. *Radiol Bras.* 2014;47:149–53.

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