Obesity is an increasing health problem worldwide. Visceral fat has been associated with a higher risk of metabolic syndrome. The co-occurrence of a cluster of factors is constantly increasing, making this syndrome the leading cause of cardiovascular diseases and diabetes type 2. The present investigation showed that visceral fat in overweight and obese subjects with metabolic syndrome has a high correlation with HOMA, triacylglycerol, increased wait hip ratio and several other metabolic variables. The only parameter that did not differ among the three groups of subjects was the level of cholesterol.