# Skin tags, leptin, metabolic syndrome and change of the life style.

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## **Abstract**

#### **BACKGROUND:**

Skin tags (STs), are papillomas commonly found in the neck and in the axillae of middle-aged and elderly people. Metabolic syndrome (MS) is a complex of interrelated risk factors for cardiovascular disease and diabetes. Epidemiologic studies of different ethnic populations have indicated that hyperleptinaemia and leptin resistance are strongly associated with MS.

#### AIM:

To study the possible relation of skin tags and leptin levels to MS guided by the International Diabetes Federation (IDF) diagnostic criteria.

#### **METHODS:**

This study included 80 participants, 40 ST patients and 40 apparently healthy controls. Age, sex, waist circumference (WC), body mass index (BMI), smoking status, fasting glucose level, insulin level and insulin resistance were estimated as well as cholesterol, triglycerides, HDL, criteria of MS, and leptin levels.

#### **RESULTS:**

The univariate analysis showed that WC, BMI, fasting glucose, insulin levels, insulin resistance, cholesterol, triglycerides, HDL, and leptin levels were significantly higher in ST patients compared to controls (P<0.001). The multivariate analysis between MS components and ST showed that only high triglyceride levels (OR 1.205/95% CI 1.044-1.391/P=0.011) and low HDL levels (OR 0.554/95% CI 0.384-0.800/P=0.002) were significantly associated with ST. Multivariate linear regression analysis of the predictors of high plasma leptin levels, showed that high triglyceride levels (OR 0.287/95% CI 0.410-3.56/P=0.014), and low HDL levels (OR -0.404/95% CI -8.7 to -2.08/P=0.002) were significant predictors.

### **CONCLUSION:**

The results of this study suggested that the presence of both ST and hyperleptinaemia in patients with STs may be associated with high levels of triglycerides and low levels of HDL and this could suggest that changing the life style of patients with ST may have a beneficial role.

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