Objectives: This study aimed to determine the frequency and features of metabolic syndrome in Congolese women affected by PCOS using two different definitions: the IDF 2009 consensus definition for Metabolic Syndrome and the Rotterdam 2003 consensus definition.

Materials: We evaluated 54 Congolese women with PCOS and 41 normal women (average age 24.71 years ± 6.0) using IDF 2009 consensus definition for Metabolic Syndrome and the Rotterdam 2003 consensus definition.

Blood samples were taken to measure HDL and LDL cholesterol, triglycerides, fasting insulin and blood glucose levels, and the homeostatic model (HOMA-IR) was used to assess insulin resistance under basal conditions.

Results: 32.6% of PCOS patients presented an abdominal circumference >=80 cm, and 10.5% >88 cm. Although the body mass index was not statistically different between PCOS and control women, Metabolic Syndrome evaluated by the IDF 2009 consensus was detected in 13% of PCOS women meanwhile the Rotterdam 2003 consensus detected 5.6% of cases. Our study did not reveal any high triglycerides blood concentration (>=150 mg/dL) neither in women with PCOS nor in control women, although the difference rate of triglycerides between the two groups had been statistically significant (57.12 ± 21.6 vs 48.52 ± 12.87, p < 0.05).

Conclusions: Metabolic Syndrome is a common feature in Congolese women affected by PCOS. The IDF criteria are most suitable than the Rotterdam 2003 consensus to evaluate Metabolic Syndrome in Congolese women with PCOS. Further research is required to assess triglycerides levels in Congolese woman.