Insulin resistance might be involved in the development of endocrine and metabolic abnormalities. Therefore, a prospective, descriptive and transversal study was designed. Simple, sequential sampling of 30 patients aged 18 to 39 years, who met the Rotterdam criteria for PCOS and attend the Gynecology Department at University Hospital of Caracas, between March and September 2013. Fasting glucose and insulin and 2 hours after administration of 75 g glucose orally was performed, and glucose/insulin ratio at baseline and at 2 hours after administration of 75 g glucose orally and HOMA-IR was calculated.

Results: The study group presented a mean age of 27 years. BMI between 19 and 48 kg/m², 40% (12/30) showed normal weight, 30% overweight (9/30) and obesity in 30% (9/30). Central obesity (CA: >= 88 cm) was reported in 56.6 % (17/30), and acanthosis nigricans in 80% (24/30) of cases. 13.3% (4/30) had impaired fasting glucose (? 100 mg/dl) with a median of 89.5 mg/dl. The glycemia at 60 min was median 115 mg/dl. 6.6% (2/30) developed intolerance carbohydrates (? 140 mg/dl) with a median of 101.5 mg/dl. The elevated basal insulin (? 12 mU/L) was reported in 76.6 % (23/30), with a median of 15.8 mU/L. At 60 min the median was 85.2 mU/L and impaired insulin at 120 min (? 60 mU/L) in 53.3 %, with a median of 64.7 mU/L; 86.6 % (26/30) patients shown HOMA-IR ≥ 2.5, and fasting G/I ratio (? 4.5) and 2 hours (? 1.0) was abnormal in 93.3 % (28/30) and 83.3% (25/30) respectively. The correlation between HOMA-IR and fasting G/I ratio (-0.60) was moderate and between HOMA-IR and the G/I ratio at 2 hours is equally moderate (-0.46). Conclusión: Hyperinsulinemia is common in Venezuelan patients with PCOS, patients should be screened using an oGTT to identify disturbances in glucose metabolism. Keywords: PCOS, insulin resistance, hyperinsulinemia, carbohydrate metabolism.