

**Prevalence of Insulin Resistance and Determination of
Risk Factors for Glucose Intolerance in Polycystic Ovary
Syndrome: A Cross-sectional Study of Chinese Infertility**

Patients

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摘要

Abstract

Objective

To determine the prevalence of abnormalities in glucose metabolism in patients with polycystic ovary syndrome (PCOS) and control infertility patients in Taiwan, and to determine the predictive risk factors for PCOS.

Design

Cross-sectional study.

Setting

Infertility Center, Taiwan Adventist Hospital.

Patient(s)

Three hundred fifty-six patients with PCOS and 974 control infertility patients.

Intervention(s)

None.

Main Outcomes Measure(s)

Hormone assay and 75-g oral glucose tolerance test.

Result(s)

Patients with PCOS were younger (32.7 vs. 35.3 years) with a higher body mass index (BMI) (22.4 vs. 20.6 kg/m²) than controls. Even after BMI adjustment, patients with PCOS still had significantly higher fasting glucose (97.2 vs. 94.4 mg/dL), fasting insulin (5.6 vs. 4.1 μ IU/mL), 2-hour glucose (108.1 vs. 96.0 mg/dL), and 2-hour insulin levels (38.0 vs. 27.0 μ IU/mL), and higher homeostasis model assessment of insulin resistance (HOMA-IR) values (1.3 vs. 1.0) than control patients. The prevalence of impaired glucose tolerance and diabetes mellitus in patients with PCOS was 7.6% and 3.1%, respectively, compared with 2.9% and 0.2% in the control group, respectively. Only fasting glucose and insulin, 2-hour insulin, HOMA-IR, age, androstenedione, and status (PCOS vs. control) had a significant impact on 2-hour glucose level. However, BMI and waist/hip ratio did not show a significant impact on 2-hour glucose level.

Conclusion(s)

Chinese women with PCOS are at increased risk for insulin resistance and glucose intolerance compared with controls. Body mass index failed to show significant impact on 2-hour glucose levels in our infertility patients..