Insulin resistance affects 50-70% of women with polycystic ovary syndrome (PCOS).

**The aim of our study** was to estimate the prevalence of insulin resistance by different methods in a single cohort of 63 PCOS patients diagnosed by the Rotterdam criteria.

**Methods:** Anthropometric measurement, examination and fasting blood tests were made on the 9-5th days of their periods.

**HOMA-IR** (cut off >2.5) and **QUICKI** (cut off 0.357) was used to assess insulin resistance.

**Results:** Insulin resistant (IR) patients represented 48% and 65% of the cohort based on HOMA-IR (HIR) and QUICKI (QIR), respectively.

- Compared to insulin sensitive (IS) patients, IR patients were older (25.5 ± 5 vs. 30 ± 6 years).
- The body mass index (BMI) was similar in the HIR (35.5 ± 7.33 kg/m²) and QIR (33.15 ± 7.81 kg/m²) and similar BMI was detected in IS patients according to HOMA (HIS, 25.7 ± 4.74 kg/m²) or QUICKI (QIS, 25.18 ± 4.33 kg/m²).

Fasting glucose levels did not differ in between IR groups (HIR: 4.88 ± 0.51; QIR: 4.88 ± 0.53 mmol/l), but **fasting insulin levels** were higher in HIR (18.09 ± 8.05 mIU/l) compared to QIR (15.64 ± 7.78 mIU/l) patients.

Lipid profiles and HOMA-IR did not differ significantly between IR groups.

**Conclusion:** By using QUICKI we found more IR patient than with HOMA. Fasting insulin levels and BMI were lower in the QIR than in the HIR group. The FAI was similarly elevated in the IR groups, and was lowest in the QIS group.

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**Our data**

N= 77 single cohort form 1 center

PCOS was diagnosed based on the **Rotterdam criteria**

Insulin resistance was calculated in 63 patients

Based on HOMA-IR and QUICKI we divided the patients into 4 groups.

HIR: insulin resistant based on HOMA-IR

HIS: insulin sensitive based on HOMA-IR

QIR: insulin resistant based on QUICKI

QIS: insulin sensitive based on QUICKI

OGTT (oral glucose tolerance test,75g)

was made in 37 patients

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**Conclusions**

By using QUICKI we found more IR patient than with HOMA

Fasting insulin levels and BMI were lower in the QIR than in the HIR group.

The FAI was similarly elevated in the IR groups, and was lowest in the QIS group.

We suggest that QUICKI detects insulinresistance earlier than HOMA