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Ovulation induction with myo-inositol alone and in combination with clomiphene citrate in polycystic ovarian syndrome patients with insulin resistance.

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Abstract

BACKGROUND: Insulin resistance plays a key role in the pathogenesis of polycystic ovariansyndrome (PCOS). One of the methods for correcting insulin resistance is using myo-inositol.

AIM: The aim of the present study is to evaluate the effectiveness of myo-inositol alone or in combination with clomiphene citrate for (1) induction of ovulation and (2) pregnancy rate in anovulatory women with PCOS and proven insulin resistance.

PATIENTS AND METHODS: This study included 50 anovulatory PCOS patients with insulinresistance. All of them received myo-inositolduring three spontaneous cycles. If patients remained anovulatory and/or no pregnancy was achieved, combination of myo-inositol and clomiphene citrate was used in the next three cycles. Ovulation and pregnancy rate, changes in body mass index (BMI) and homeostatic model assessment (HOMA) index and the rate of adverse events were assessed.

RESULTS: After myo-inositol treatment, ovulation was present in 29 women (61.7%) and 18 (38.3%) were resistant. Of the ovulatory women, 11 became pregnant (37.9%). Of the 18 myo-inositol resistant patients after clomiphene treatment, 13 (72.2%) ovulated. Of the 13 ovulatory women, 6 (42.6%) became pregnant. During follow-up, a reduction of body mass index and HOMA index was also observed.

CONCLUSION: Myo-inositol treatment ameliorates insulin resistance and body weight, and improves ovarian activity in PCOS patients.

KEYWORDS: Anovulation; PCOS; clomiphene citrate; insulin resistance; myo-inositol

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