



Comparison of iodine status and thyroid function among women in Isfahan with and without polycystic ovary syndrome

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Abstract

Polycystic ovary syndrome (PCOS) is the most common endocrine disorder in women on fertility aged. The present study compared 19-29 years old women with PCOS and healthy women living in Isfahan in iodine status and thyroid function. In this case-control study, 56 patients with PCOS and 56 healthy women were selected respectively. Demographic indicators, socioeconomic status, anthropometry and body mass index [BMI], physical activity, TSH, thyroxine, and urinary iodine concentration were measured in participants. There was no significant difference between the case and control groups in socioeconomic variables, but BMI, waist circumference and weight were significantly higher in the case group compared to the control group. In addition, there was a negative significant relationship between increased thyroxine level in the second and third tertiles and the chance of developing PCOS ($\alpha=0.95$, $p=0.01$). A positive inverse relationship was found between TSH levels was not statistically significant between two groups ($\alpha=0.95$, $p=0.07$). Finally, there was no significant difference between the case and control groups in urinary iodine concentration ($\alpha=0.95$, $p=0.59$). Increase in BMI, weight, waist circumference, and serum thyroxine level is associated with the incidence of PCOS in women, but it seems that urinary iodine concentration has no effect on developing PCOS.

Keywords: polycystic ovary syndrome, thyroid function, urinary iodine concentration