STRESZCZENIE W JĘZYKU ANGIELSKIM

Objective: Anti-Müllerian hormone (AMH) is a glycoprotein, a member of the transforming growth factor β family, reflecting the number of ovarian antral follicles. Polycystic ovary syndrome (PCOS) is a common endocrinopathy predisposing to infertility, metabolic and cardiovascular complications. Previous studies have shown that women with type 1 diabetes mellitus (T1DM) and PCOS have a normal serum AMH level despite polycystic ovarian morphology (PCOM). As it is not clear why women with PCOS + T1DM would not have elevated level of AMH, we hypothesize that women with T1DM and PCOS have similar hormonal profile and serum AMH level as the one observed in classic PCOS.

Aim: The aim of the study was to assess the serum AMH concentration and hormonal profile in women with PCOS and T1DM, women with PCOS without T1DM, women with T1DM without PCOS and control group.

Methods: We studied 89 women: 37 with T1DM (16 with PCOS+T1DM, 21 with T1DM/no-PCOS), 36 with PCOS (PCOS) and 16 healthy women (control group) matched for age and BMI. A clinical examination, estimation of serum AMH and sex hormones, and an ultrasonographic evaluation of the ovaries were performed for all study participants.

Results: Serum AMH level was significantly higher in women with PCOS+T1DM than in those with T1DM/no-PCOS ($p<0.001$) and was not different between both PCOS groups (PCOS vs PCOS+T1DM). The number of ovarian follicles was higher in patients with PCOS+T1DM and PCOS vs the control ($p=0.007$, $p<0.001$) and vs cases of T1DM/no-PCOS ($p<0.001$, $p<0.001$, respectively). In both groups, PCOS+T1DM and PCOS, AMH was related to LH ($r=0.5$, $p=0.036$; $r=0.3$, $p=0.031$) and to ovarian follicle number ($r=0.7$, $p<0.001$; $r=0.4$, $p=0.006$). In multivariate logistic regression analysis, serum AMH was the only predictor of PCOS in T1DM women (OR=1.73; 95% CI 1.07-2.79, $p=0.023$).

Conclusion: Women with T1DM and PCOS have similar hormonal profile and serum AMH level as observed in classic PCOS.