The presence of antibodies towards human gametes could be one of the reasons for human infertility. Infertility is very common in patients with polycystic ovarian syndrome (PCOS) and it is usually attributed to the chronic anovulation in these women.

The aim of the present study was to investigate the prevalence of antisperm antibodies in women with PCOS compared to healthy controls and to assess the relationship between them and the presence of infertility and some cardiometabolic risk factors.

Patients and methods: The study included 87 premenopausal women with mean age 24.5±5.4 years, divided in three groups - nonobese PCOS (n=50), obese PCOS (n=20) and nonobese healthy controls (n=17) with similar age. Antisperm antibodies (ASA) were measured using ELISA method against sperm antigens. Because of the different cut-off values of the barrier index (Ib) in different measurements, in the analysis of the data we used the Ib/cut-off ratio.

Results: PCOS patients with or without obesity had significantly higher Ib/cut-off-ratio compared to the control group (0.91±0.16 and 0.93±0.21 vs. 0.56±0.25 respectively, p<0.001). The prevalence of ASA-positive patients was lower in healthy controls group compared to PCOS patients (5.9% vs. 30% and 20% respectively). Infertility was present in 5 PCOS women, none of them however had positive ASA. No correlation was found between ASA and the indices of visceral obesity, insulin resistance, lipid profile and arterial blood pressure.

Conclusion: PCOS patients have significantly higher ASA compared to healthy controls. This however is not linked to the insulin resistance and unfavorable cardiometabolic profile of the patients.