

Polycystic Ovary Syndrome Is Associated with an Increased Mortality Risk

Terhi Piltonen. *University of Oulu and Oulu University Hospital*

Meri-Maija Ollila¹, Riikka K. Arffman¹, Laure Morin-Papunen¹, Elisa Korhonen¹, Mika Gissler², Terhi T. Piltonen¹.

¹Department of Obstetrics and Gynecology, Medical Research Center Oulu, PEDEGO Research Unit, University of Oulu and Oulu University Hospital, Oulu, Finland, ²THL Finnish Institute for Health and Welfare, Department of Knowledge Brokers, Helsinki, Finland.

Women with polycystic ovary syndrome (PCOS) are burdened with multimorbidity, but there is only limited knowledge on mortality. Here, we investigated in a register-based 1:3 matched case-control study, whether women with PCOS have increased all-cause, or cause-specific mortality compared to women without PCOS. Women with PCOS (i.e., cases) were identified from the Finnish Care Register for Health Care using the International Classification of Diseases, Revisions 8, 9, and 10 (ICD-8, ICD-9, and ICD-10, respectively) codes for PCOS (ICD-10: E28.2, ICD-9: 256.4, ICD-8: 256.9). Control women were matched according to the year of birth and residential area. The time and cause of death as well as the highest level of education were extracted from the register of Statistics Finland. The registers covered the years 1969-2019. Crude and education-adjusted Cox proportional hazard models were applied, and the results were reported as hazard ratio (HR) with 95% confidence intervals. The study included 9,839 women with PCOS and 70,705 controls. Overall, 1,003 controls and 177 women with PCOS died during the follow-up period. The women with PCOS died significantly younger than the controls (51.4 ± 16.4 versus 52.9 ± 16.6 years, $p < 0.001$). In the unadjusted analysis, women with PCOS had increased overall mortality (HR=1.53 [1.28-1.84]) as well as increased mortality due to tumors (HR=1.42 [1.06-1.90]), endocrine, nutrition, or metabolic diseases (HR=2.45 [1.02-5.96]), and diseases of the circulatory system (HR=1.77 [1.19-2.62]). In the adjusted analysis, women with PCOS had increased overall mortality (HR=1.47 [1.23-1.76]), as well as increased mortality due to diseases of the circulatory system (HR=1.67 [1.13-2.48]) and tumors (HR=1.38 [1.04-1.85]). Regarding more specific causes of death, women with PCOS had increased mortality due to diabetes (HR=3.07 [1.16-8.08]), other diseases of the circulatory system (HR=2.07 [1.00-4.25]), and bronchitis (HR=3.61 [1.01-12.88]) in the adjusted analyses. In conclusion, PCOS is a severe lifelong syndrome that increases mortality. More emphasis should be targeted on the prevention and treatment of diabetes, circulatory diseases, tumors, and respiratory diseases in women with PCOS to reduce the mortality risk.

Presentation Date: June 18

Presentation Time: 9:45 AM - 11:15 AM

Location: Room W178A