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Sporadic anovulation in women with regular menstruation

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Abstract

Sporadic anovulatory cycles may occur among regularly menstruating women; however, the prevalence of eumenorrheic anovulation has not been well described. Moreover, the influence of hormones in a preceding anovulatory cycle and the impact on a subsequent cycle's hormone levels is unknown. It is also possible that anovulation among regularly menstruating women may be associated with androgen levels and endocrine changes similar to those seen in women with PCOS. We observed that 8.3% of cycles were anovulatory among a cohort of 259 regularly menstruating women with no known menstrual disorders. Women with sporadic anovulatory cycles were observed to have greater LH:FSH ratios and AMH levels, greater follicular phase LH, lower SHBG, and elevated fasting insulin. In addition, higher testosterone levels were associated with a greater rate of anovulation, and sporadic anovulation was related to lower estradiol and progesterone levels during a woman's ovulatory cycle, whether it occurred before or after the anovulatory cycle. Collectively, these results suggest a possible underlying cause of anovulation, such as a longer term subclinical follicular, ovarian or hypothalamic/ pituitary dysfunction, that may occur across a continuum, even among healthy, regularly menstruating women. Thus, normal menstrual history alone may be insufficient to identify women with ovulatory dysfunction, and even a single anovulatory cycle may be indicative of subclinical ovulatory dysfunction.

Biography

Sunni L. Mumford completed her Ph.D in epidemiology from the University of North Carolina and is currently an Earl Stadtman Investigator in the Epidemiology Branch of the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development. Dr. Mumford has been an integral investigator on two longitudinal epidemiologic studies: the BioCycle Study and the Effects of Aspirin on Gestation and Reproduction (EAGeR) Trial. Dr. Mumford also serves as a principal investigator in the Folic Acid and Zinc Supplementation Trial (FAZST), which seeks to determine if dietary supplementation improves semen quality. Overall, Dr. Mumford's research seeks to elucidate the complex relationships between diet, metabolism, and determinants of fertility.