American Society for Reproductive Medicine, Oct. 17-21

October 23 2015

The annual meeting of the American Society for Reproductive Medicine was held from Oct. 17 to 21 in Baltimore and attracted approximately 5,000 participants from around the world, including physicians, researchers, nurses, technicians, and other health care professionals interested in reproductive medicine. The conference featured more than 1,000 abstracts that focused on reproductive biology, as well as more than 200 different vendors.

In one study, Jorge E. Chavarro, M.D., Sc.D., of the Harvard T.H. Chan School of Public Health in Cambridge, Mass., and colleagues found that for couples undergoing in vitro fertilization, trans fat intake in males may impact clinical outcomes by reducing fertilization rates.

"Our findings also suggest that these fats may adversely impact clinical pregnancy and live birth rates, but the study was too small to adequately evaluate those outcomes. To our knowledge, this is the first time that this relationship was reported, so it is very important that this question is addressed in other studies," Chavarro said. "This was a good pilot study that confirmed the evidence from prior animal studies that trans fat reduced spermatogenesis *and* fertility, and is consistent with previous work from our group showing lower sperm concentration with higher trans fatty acid consumption among young males. However, this is certainly not the last word on trans fats and spermatogenesis. Additional evaluation of this issue is desirable."

In another study, Malgorzata Skaznik-Wikiel, M.D., of the University of

Colorado in Denver, and colleagues sought to determine if a high-fat diet without obesity is detrimental to ovarian function and fertility. The investigators found that exposure to a high-fat diet (even without obesity) causes a decrease in primordial follicle numbers and reduces fertility.

"Prolonged exposure to a high-fat diet is associated with decreased ovarian reserve and impaired fertility independent of obesity," Shaznik-Wikiel said. "A high-fat diet, not just being obese, could be detrimental to fertility in women. We can better counsel our patients about not just maintaining a healthy weight but also on watching what they eat. Future studies should focus on explaining why a high-fat diet causes ovarian dysfunction and if the changes are reversible with switching to a low-fat diet."

Alastair Sutcliffe, M.D., Ph.D., of the University College Hospital London, and colleagues found that the risk of ovarian cancer is increased in women after assisted reproductive therapy (ART), whether they became pregnant or not. No increased risk was found with increasing number of cycles of ART, but risk increased as parity decreased. Risk was also higher for women with a "female factor" cause of infertility, particularly endometriosis.

"The key finding is that the investigators found an increased risk of ovarian tumors in the overall sample population," said Richard Paulson, M.D., the vice president of ASRM and chief of endocrinology at the University of Southern California in Los Angeles. "There has been a known association between ovarian cancer risk and infertility. Women who have more babies tend to be protected from ovarian cancer, whereas those women who remain childless have a higher risk of ovarian cancer. Endometriosis, infertility and childlessness have been tied to an increased risk of ovarian cancer."

"Certain results argue against an association with ART itself (no increased risk in male factor infertility or with increasing number of cycles), but others (increased risk with decreasing age at first exposure and in the first few years after treatment) leave open the possibility that ART might affect risk," the authors conclude. "Further investigation to support these initial results will include analysis by tumor behavior and histopathological sub-type."

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