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ALCOHOL USE AND TOBACCO SMOKING IN RELATION TO OVARIAN RESPONSE AMONG EGG DONORS.

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OBJECTIVE: To evaluate the associations of alcohol intake and tobacco smoking and markers of ovarian response to hyperstimulation among young, healthy egg donors.

DESIGN: Prospective cohort study.

MATERIALS AND METHODS: Women participating in the oocyte donation program at the IVI-Murcia clinic, between January 2017 and January 2018, were invited to participate in the study. Donors who enrolled, were asked to report their habitual use of alcohol and tobacco over the previous year. We fitted linear regression models to evaluate the association between these behaviors and peak E2 levels and Poisson regression models to evaluate their relation with oocyte yield and yield of MII oocytes while adjusting for age, body mass index (BMI) and co-adjusting for these two behaviors. Statistical analyses were performed using the Statistical Package for the Social Sciences (SPSS) version 22.0 (IBM Corporation, Armonk, NY, USA).

RESULTS: A total of 88 donors, with a mean age of 24 years and BMI of 22 kg/m², were recruited into the study. Most women (55%) reported smoking in the past year and nearly half (42%) reported moderate (1-2 times/ week) alcohol use in the past year. Women who reported moderate alcohol consumption over the previous year had a 14% lower (95% CI: -5%, -22%) oocyte yield than women who reported no alcohol consumption. Peak E2 and yield of MII oocytes, however, did not differ according to alcohol consumption. Tobacco smoking was unrelated to the three markers of ovarian response to stimulation.

CONCLUSIONS: Low to moderate alcohol consumption in the year prior to the stimulation cycle was related to a lower number of oocytes retrieved among donors. References: 1. Dodge LE, Missmer SA, Thornton KL, Hacker MR. Women's alcohol consumption and cumulative incidence of live birth following in vitro fertilization. *J Assist Reprod Genet.* 2017 Jul;34(7):877-883. <https://doi.org/10.1007/s10815-017-0923-5>. Epub 2017 Apr 20. 2. Vanegas JC, Chavarro JE, Williams PL, Ford JB, Toth TL, Hauser R, Gaskins AJ. Discrete survival model analysis of a couple's smoking pattern and outcomes of assisted reproduction. *Fertil Res Pract.* 2017;3. pii: 5. <https://doi.org/10.1186/s40738-017-0032-2>. Epub 2017 Feb 20. Supported by: MINECO-FEDER (AGL 2015-66341-R), 20040/GERM/16 and European Union, Horizon 2020 Marie Skłodowska-Curie Action, REPBIOTECH 675526. e174 ASRM Abstracts Vol. 110, No.4, Supplement, September 2018 FERTILITY PRESERVATION