

Ethnicity as a determinant of ovarian reserve: differences in ovarian aging between Spanish and Indian women

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Objective: To investigate differences in ovarian reserve markers (antimüllerian hormone [AMH] and antral follicle count [AFC]) in Indian and Spanish women.

Design: Cross-sectional study.

Setting: In vitro fertilization (IVF) clinics.

Patient(s): Infertile Spanish (n = 229) and Indian (n = 236) women who underwent controlled ovarian stimulation for IVF from January to October 2012.

Intervention(s): None.

Main Outcome Measure(s): Data on ovarian reserve markers and results after ovarian stimulation were collected.

Result(s): The mean age of women undergoing their first or second IVF cycle was significantly higher in Spanish than in Indian women (37.5 ± 3.3 years vs. 31.5 ± 3.8 years). Despite this 6-year age gap, AFCs were similar (9.5 ± 4.7 vs. 9.9 ± 4.6), as were day 3 FSH levels (7.5 ± 4.5 IU/L vs. 6.9 ± 2.3 IU/L). AMH levels were slightly lower in Spanish women (1.6 ± 1.7 ng/mL vs. 2.5 ± 1.6 ng/mL). Multivariate regression analysis showed that being Indian decreased AFC by 2.3, such that AFC in Indian women was similar to that in Spanish women 6.3 years older (95% confidence interval 3.39–1.10).

Conclusion(s): Similar ovarian reserve markers and ovarian response were observed in women with a 6-year age difference in favor of the Spanish, suggesting ethnic differences in ovarian aging. Further research is needed to understand whether these differences are genetically induced or are caused by other variables, such as nutrition. Our results may help clinicians to counsel infertile women when discussing assisted reproductive technology outcomes according to age and ethnic background. (Fertil Steril® 2014;102:244–9. ©2014 by American Society for Reproductive Medicine.)

Key Words: Ethnicity, ovarian aging, AMH, AFC

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