

# Ethnicity is an independent predictor of IVF-ICSI outcome: a study of 5,549 cycles in Spain and India

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## Abstract

**Aim:** To determine the role of ethnicity on IVF/ICSI outcomes between Indian and white Caucasian women.

**Settings and design:** Retrospective cohort study.

**Materials and methods:** White Caucasian and Indian women undergoing IVF/ICSI treatment cycles. Total 5549 self, non-donor, fresh IVF cycles conducted from January 2014 to March 2015, out of which, 4227 were white Caucasian and 1322 were Indian. Data were collected on baseline characteristics, IVF cycle parameters and outcomes. Ongoing pregnancy rate (OPR) was measured as main outcome.

**Results:** Indian women differed significantly from white Caucasian women in baseline characteristics like age ( $30.6 \pm 0.2$  versus  $37.6 \pm 0.1$  years;  $p < 0.001$ ), BMI ( $22.3 \pm 0.2$  versus  $26.6 \pm 1.0$  kg/m<sup>2</sup>;  $p < 0.05$ ), duration of infertility ( $6.9 \pm 3.0$  versus  $2.5 \pm 0.1$  years;  $p < 0.001$ ) and antral follicle count (AFC) ( $8.9 \pm 0.4$  versus  $7.5 \pm 0.2$ ;  $p < 0.001$ ). Indian women had lower implantation rate (30.1% versus 39.6%;  $p < 0.001$ ) and OPR (35.1% versus 41.7%;  $p < 0.001$ ) compared with white Caucasian women. Regression analysis proved independent effect of ethnicity on OPR (OR 0.944; 95% CI 0.928–0.961;  $p < 0.001$ )

**Conclusions:** OPR was significantly lower among Indian ethnic group following IVF/ICSI suggest that ethnicity, like age, is a major and an independent predictor of IVF outcome.

## Keywords

Ethnicity, ICSI, in vitro fertilization, Indian, white caucasian

## History

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