Effect of ethnicity on the clinical presentation of women with Polycystic Ovary Syndrome; a 20-year retrospective cohort study

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Background
Polycystic ovary syndrome (PCOS) has a variety of signs and symptoms comprising different phenotypic presentations. Insulin resistance is known to be associated with PCOS. Despite the documented effect of ethnicity on insulin resistance, there is little known about the effect of ethnicity on the clinical presentations of PCOS. Our group has previously shown that the ethnicity did not have any significant effect on the cardiovascular outcomes in women with PCOS. We compared the clinical presentation of white and south Asian (SA) women with PCOS.

Methods
Design: Retrospective analysis of a multi-ethnic database of all women with PCOS presenting to a specialist clinical in UK 1988-2009
Participants: 2207 women (684 South Asian, 1523 white) with PCOS (mean age = 26.4 years [SD 7.6 ]). 
Outcomes measures: Androgen criteria are defined as at least one of: hirsutism, acne, androgenic alopecia or documented increased free androgen index. Anovulation criteria are defined as oligomenorrhoea, amenorrhoea or infertility. Ethnicity was self-reported.

Findings
At presentation, SA women were younger than white women, had a lower metabolic risk profile (hypertension, smoking and body mass index) and less anovulation criteria, but were more likely to have diabetes, be from a deprived background and have androgen criteria (Table-1).

Interpretation
There appears to be a significant affect of ethnicity on the clinical and phenotypic presentation of PCOS. Understanding these differences may help to tailor appropriate management in defined groups of patients with this condition.