

## 9<sup>th</sup> Yazd International Congress and Student Award on Reproductive Medicine with 4<sup>th</sup> Congress of Reproductive Genetics

### Poster Presentations

#### P-163

#### Polymorphism of *ESR1* (XbaI G/A) as a genetic agent in women with poor response to controlled ovarian hyperstimulation

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**Background:** Physiological function of ovarian regulates by reproductive hormones including estrogen. Estrogen is a steroidal hormone and its actions in ovary mostly occur through its binding to intracellular receptor  $\alpha$  and  $\beta$ . *ESR1* ( $\alpha$ ) gene include many polymorphic sites (SNPs) located along various regions of it that control expression and function of this receptor.

**Objective:** This paper aimed to investigate the association of XbaI A/G (rs9340799) with poor

ovarian response in Iranian women undergoing IVF treatment referred to Yazd Reproductive Science Institute.

**Materials and Methods:** To do so, a group of 40 women with normal response ovarian and a group of 209 women with poor response ovarian in IVF cycles were included. Genomic DNA extraction was performed with Blood DNA Extraction Kit (Favorgen Co.). Using PCR-FRLP technique and XbaI restriction enzyme SNP in -29 G/A site of *ESR1* gene were genotyped.

**Results:** Our finding show polymorphisms in *ESR1* (rs9340799) was significantly different between women with normal and poor response ovary considering AG+GG and GG+AA ( $p = 0.005$ ) genotype but was not statistically signification regarding to AA+AG ( $p \leq 0.05$ ).

**Conclusion:** The study of SNPs of the *ESR1* gene is an interesting field of research that could provide us with new facts considering the way each woman responds to standard stimulation protocol in IVF cycle.

**Key words:** Alpha-estrogen receptor, Polymorphism -29 G>A (rs9340799), Poor ovarian response, RFLP-PCR.