

## Different ovarian stimulation protocols for expected suboptimal responders undergoing IVF treatment: a randomized controlled trial

Ksenia Ob'edkova, Alexandr Gzgzyan, Valeria Muller, Igor Kogan, Natalia Tapilskaja, Inna Krikheli, Lyli Dzhemlikhanova, Irina Mekina, Elena Lesik, Evgenia Komarova, Maria Ishchuk

Department of Assisted Reproduction Technologies, FSBI D.O. Ott Research Institute of Obstetrics, Gynecology and Reproductology, St. Petersburg, Russia

### OBJECTIVE, MATERIAL AND METHODS

**Objective:** to estimate the efficacy different ovarian stimulation protocols in IVF/ ICSI cycles for expected suboptimal responders.

**Materials and methods:** Open-label, randomized controlled clinical trial involved 51 women with expected suboptimal ovarian response. Inclusion criteria for the research were age 35 – 41 years, body mass index  $\leq 30$  kg/m<sup>2</sup>, basal FSH  $\leq 15$  IU/l, antral follicle count 5 – 9, AMH  $\geq 0,8$  ng/ml, the collection  $\leq 9$  oocytes in previous IVF attempts. Exclusion criteria for the research were recurrent miscarriage, karyotype changes, severe male factor infertility. Eligible patients were randomized to either administration of 150  $\mu$ g corifollitropin alfa combined with 150 IU of daily menotropin (group I, n=25) or to 300/150 IU of daily recombinant FSH/ LH (group II, n=26) in a fixed GnRH antagonist protocol (Fig.1).

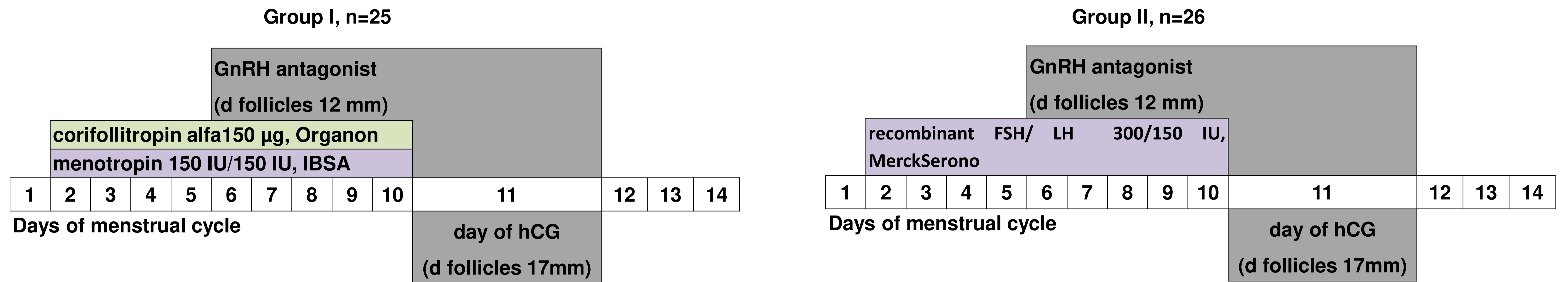


Fig.1 Ovarian stimulation protocols

### RESULTS

Patients in the two groups did not differ significantly in age, gynecological background and hormonal characteristics (Fig.2)

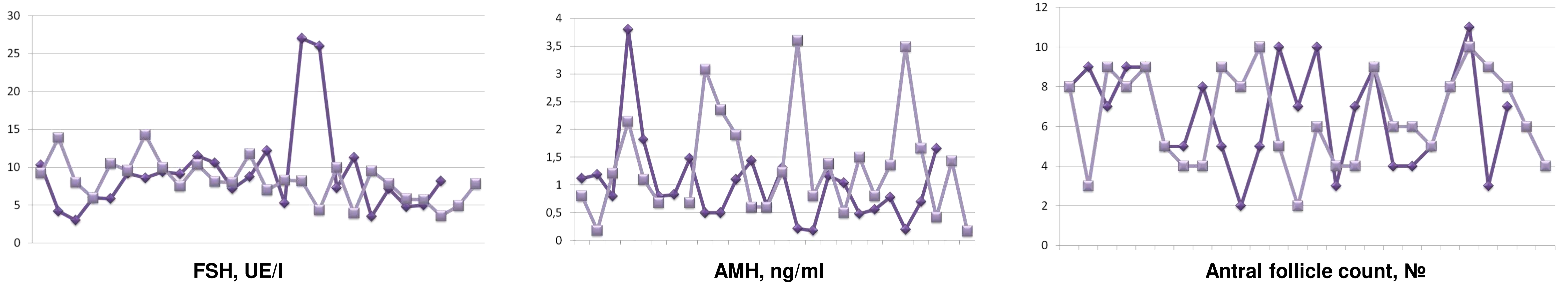


Fig.2 Hormonal characteristics

The number of follicles on the day of hCG, oocytes retrieved, MII oocytes, 2pn zygote, good-quality transferred embryos and pregnancy rate were comparable between the two groups (Fig.3). Nevertheless, only patients in recombinant FSH/ LH group had cryopreserved embryos. Odds ratio for pregnancy did not differ between the two groups (OR (95% CI) = 1,754 (0,368 – 8,374)  $p > 0,05$ ).

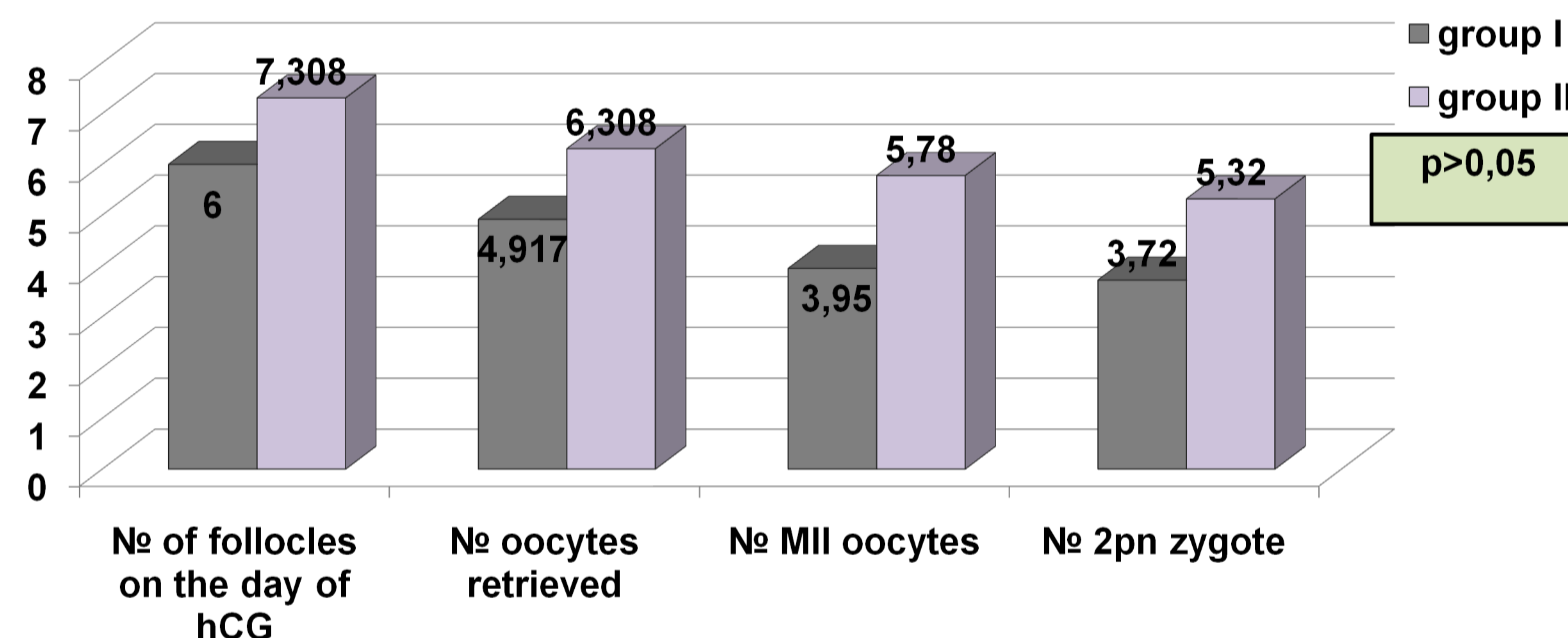


Fig 3. Cycle characteristics

### CONCLUSION

Suboptimal ovarian response represents a challenge for optimal treatment regimens. Although a recombinant FSH/LH protocol may have increased the number of cryopreserved embryos, no difference was observed in ongoing pregnancy rates. Though, future clinical research should be done as multicenter randomized controlled trial focused on oocyte quality and embryo morphology characteristics.

### CONTACT

Address for correspondence: Ksenia Ob'edkova, tel: +79112984520, [obedkova\\_ks@mail.ru](mailto:obedkova_ks@mail.ru)

ClinicalTrials.gov Identifier: NCT03177538