

## THE URINE LH TEST DURING FINAL OOCYTE MATURATION IN EGG DONATION PROGRAMME

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### Abstract Body

Objective and aim of the study:

Empty follicle syndrome (EFS) is a rare and unpredictable complication of ovulation induction. In egg donation programme EFS represents crucial failure with medical, emotional and economic impact. The aim of the study is to prevent EFS by luteinizing hormone (LH) surge' detection from urine practically 24 hours before ovum pick up. The objective of the study is to prove endogenous LH peak after GnRH analogue' administration to confirm final oocyte maturation.

Design: Prospective study.

Materials and methods:

From January to September 2017 we analysed 60 egg donors treated with recombinant follicle stimulating hormone plus GnRH antagonist protocol (follitropin alfa + cetrorelix acetate). When at least 3 follicles reached a diameter of 17 mm we administrated GnRH agonist (triptorelin 0,2 mg subcutaneously) for final oocyte maturation. 8 hours later we performed urine LH test. The sensitivity of a chromatographic immunoassay LH test was 20 mIU/l. LH stick has been locating for 5 minutes in the basket with morning urine, the donors was asked to make a picture of the result and to send into office by email. 36 hours after GnRH agonist administration we retrieved oocytes by ovum pick up under short general anaesthesia.

Results:

The average age of donors was 26 years, body mass index (BMI)  $23\pm 4$ , antral follicle count (AFC)  $13\pm 1$ , maximal daily dose of follitropin alfa  $250\pm 36$  IU, total consumption of follitropin alfa  $2017\pm 436$  IU, duration of stimulation (the number of days from the onset of period until ovum pick up)  $13\pm 1$  days. We retrieved  $14,7\pm 6,3$  oocytes,  $12,6\pm 6$  oocytes in MII division. All urine LH tests were positive. In the study we did not observe empty follicle syndrome.

Conclusions:

Based on the results of this study urine LH test performed 8-9 hours after GnRH analogue' administration detects endogenous LH surge from pituitary gland. Detection of LH surge confirms appropriate cooperation with donor.

The accuracy and convenience of urine LH test are benefits of GnRH antagonist protocol in egg donation programme.

Support: none