

## **Working out the best AMH threshold for a good ovarian response in oocyte donors**

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### **CONTEXT**

AMH and AFC are currently used to predict the ovarian response to stimulation. It is especially important in oocyte donors to do a precise evaluation and selection before accepting them for an oocyte donation cycle, in terms of security for the donors and probabilities of success for the recipients. We already found in a previous study that AMH correlates positively with the number of oocytes retrieved in donors. Now we wanted to know, with a much larger cohort of oocyte donors, if an AMH cut-off could be useful to predict those donors with the best cost-effectiveness.

### **OBJECTIVE**

To find an AMH threshold for which the number of oocytes obtained after ovarian stimulation is above 7 oocytes, which is the number of oocytes that offers a greater chance of pregnancy per cycle.

### **METHODS**

Retrospective observational study performed in the Reproductive Medicine Department of a University Hospital, from January 2010 to July 2016.

### **PATIENTS**

Oocyte donors accepted in our Reproductive Medicine Department. Donors are between 18 and 35 years old. PCOS women are not accepted as oocyte donors.

### **INTERVENTION**

Measurement of AMH in a single center during the year before doing the ovarian stimulation of all oocyte donors. All donors were treated with an antagonist protocol (Ganirelix) and recombinant or urinary purified FSH, and final oocyte maturation triggering with Triptorelin 0,2mg to avoid OHSS. Results were stratified by age and use of combined oral contraception (COC). Multiple regression analysis was performed to establish the threshold for AMH to predict a response of 8 or more oocytes recovered.

### **MAIN OUTCOME MEASURES**

AMH, AFC, age, use of COCs, number of recovered oocytes (total).

### **RESULTS**

There were 1671 oocyte donors included in the study. Mean age of the donors was 26,09 ( $\pm$ SD 4,83) years old. Mean AFC was 19,19 ( $\pm$ SD 6,39) and mean AMH 3,33 ( $\pm$ SD 2,16) ng/ml. Mean number of oocytes recovered was 14,65 ( $\pm$ SD 8,07). After statistical analysis, we obtained that AMH threshold of 2 ng/ml had a sensitivity of 76,2% and a specificity of 60,9% for obtaining 8 oocytes or more.

### **CONCLUSIONS**

An AMH cut-off of 2 ng/ml could be used to predict a desired ovarian response in oocyte donors and to

ameliorate the cost-effectiveness of donation cycles, regardless of age or use of COC. Although it shouldn't be used as an absolute exclusion criterion for donation candidates, this threshold can be very useful to prioritize and better organize an oocyte donation program.

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