



# COMPARISON BETWEEN OVIDREL™ AND DECAPEPTYL™ FOR FINAL TRIGGER TO IVF OUTCOME

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## ABSTRACT

In stimulated IVF cycles, final trigger for oocyte maturation is a crucial step prior to oocyte retrieval from preovulatory follicles. In antagonist cycle, HCG (human Chorionic Gonadotropin) is usually administered for final oocyte maturation to mimic the midcycle LH (Luteinising Hormone) surge. The use of GnRH (Gonadotropin-releasing-hormone)-agonist in GnRH-antagonist protocols has become increasingly common particularly to reduce risk of ovarian hyperstimulation syndrome (OHSS). Apart from that GnRH agonist may have other benefits to induce oocyte maturity and embryo quality. A prospective case control study was done to compare the oocyte maturity, number of good quality embryos (grade 1 and grade 2) and clinical pregnancies upon final trigger with Ovidrel™ (recombinant HCG) and Decapeptyl™ (Triptorelin) (agonist trigger) in a normo and poor responder. A total of 156 antagonist cycle was assessed in this study. 51 patients were triggered with Ovidrel™ while 105 patients were triggered with Decapeptyl™. Patient with age more than 40 years old were excluded in this study. Results showed no significant difference between age ( $34 \pm 3.4$  vs  $32 \pm 3.8$ ;  $p=0.156$ ) and BMI ( $25.1 \pm 4.6$  vs  $24.8 \pm 3.9$ ;  $p=0.103$ ) between the two groups. There is no significant difference between matured oocyte collected when trigger with Ovidrel™ and Decapeptyl™ ( $85.3\%$  vs  $83.4\%$ ;  $p=0.507$ ). There is no significant difference between number of good quality embryos ( $3.5 \pm 2.3$  vs  $4.8 \pm 3.9$ ;  $p=0.402$ ). Upon observation to clinical pregnancy, there is no significant difference between the two groups ( $24.4\%$  vs  $24.7\%$ ;  $p=0.562$ ). In conclusion triggering ovulation by Decapeptyl™ results in comparable cycle outcome as compare with Ovidrel™ in a patient with normal or low responder.

## OBJECTIVE

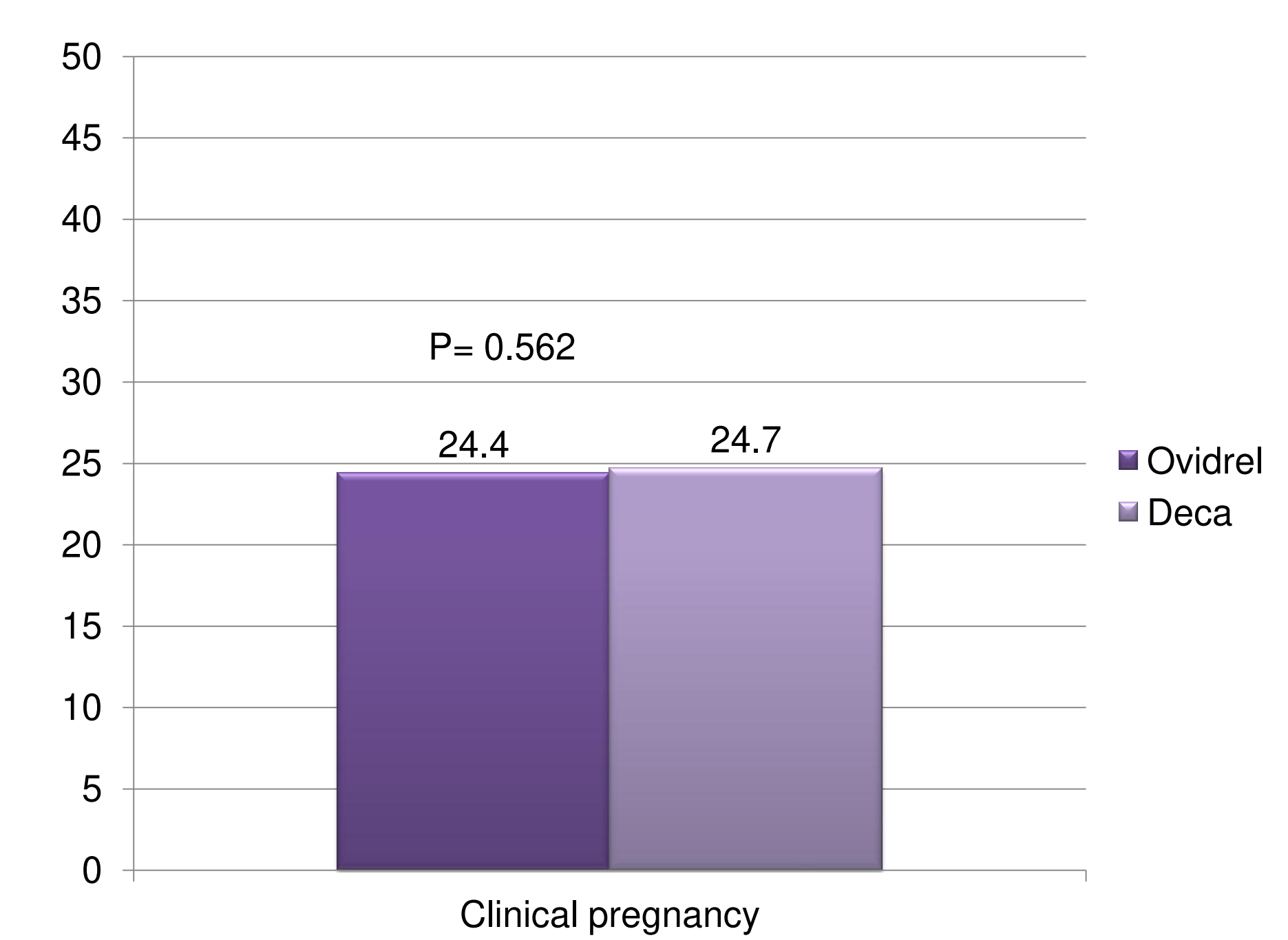
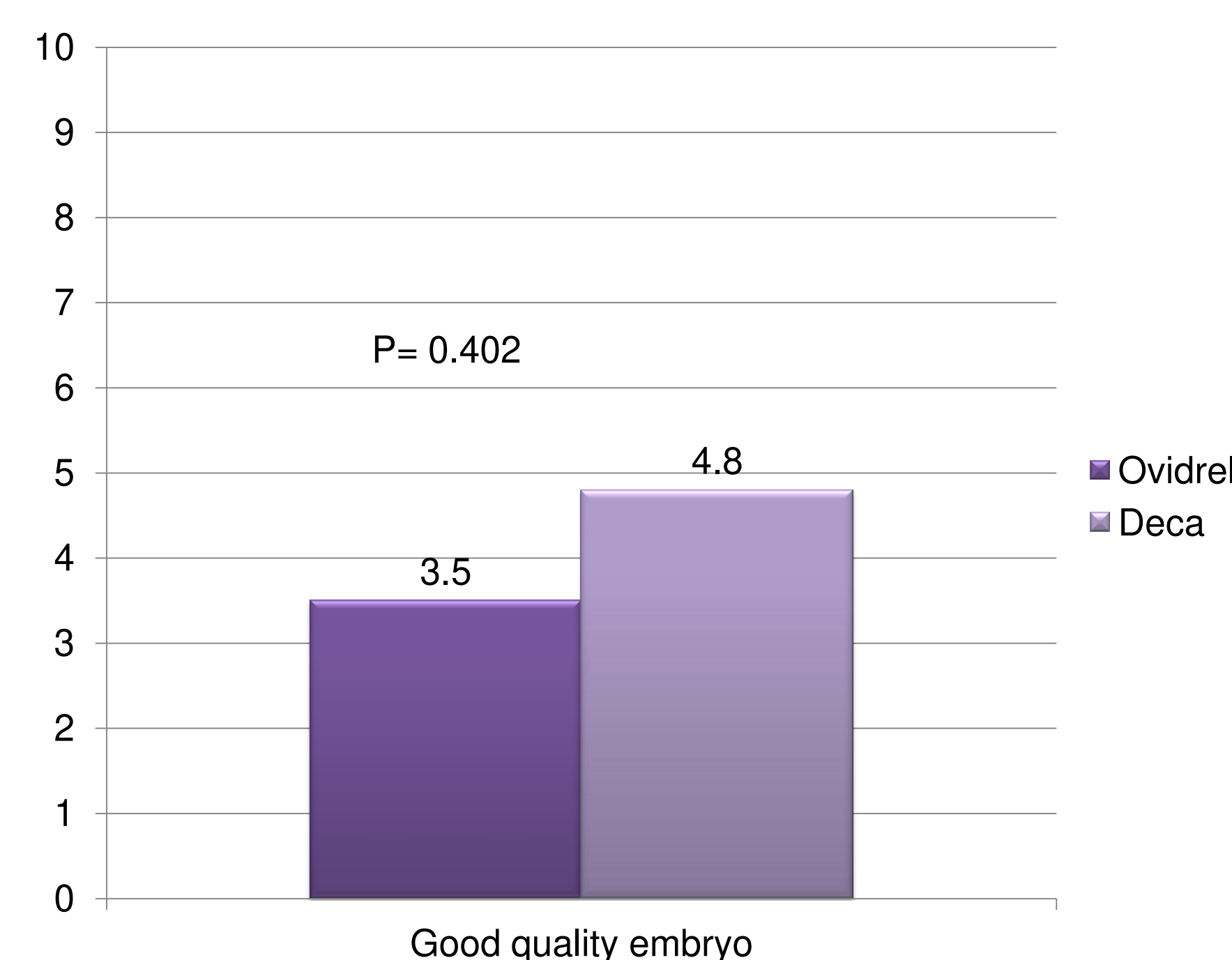
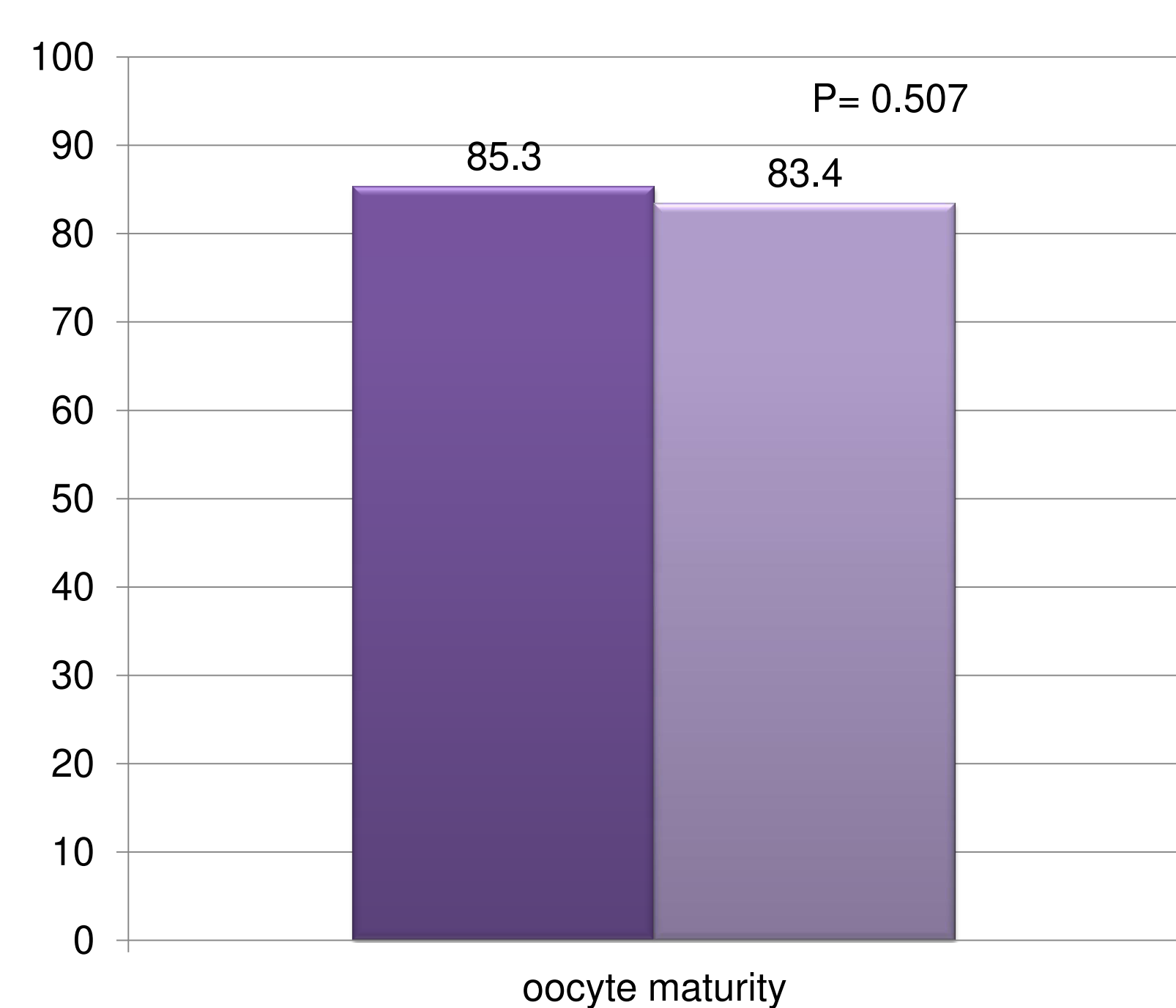
- Ø To compare oocyte maturity
- Ø To compare number of good quality embryo
- Ø To compare clinical pregnancy

## METHODOLOGY

- Ø This is prospective case control study
- Ø A total of 156 antagonist cycle with normal and poor responder was assessed in this study.
- Ø 51 patients were triggered with Ovidrel™ while 105 patients were triggered with Decapeptyl™.
- Ø Patient with age more than 40 years old were excluded in this study.
- Ø Oocyte maturity was assessed during intracytoplasmic sperm injection (ICSI).
- Ø Embryo grading used in this study was embryo grade in day 2 or day 3 according to Gardner grading system.
- Ø Clinical pregnancy was assessed after embryo transfer.

## RESULTS

Trigger	Age (years)	BMI (kg/m <sup>2</sup> )	Oocyte maturity (%)	No. of good quality embryo (Grade 1@ 2)	Clinical pregnancy (%)
OVIDREL™	$34 \pm 3.4$	$25.1 \pm 4.6$	85.3	$3.5 \pm 2.3$	24.4
DECAPEPTYL™	$32 \pm 3.8$	$24.8 \pm 3.9$	83.4	$4.8 \pm 3.9$	24.7
P value	0.156	0.103	0.507	0.402	0.562



## DISCUSSION

- Ø Gonadotropin releasing hormone agonist (GnRH-a) trigger has been used for the induction of final follicular maturation and ovulation to reduce the risk of Ovarian hyperstimulation(OHSS).
- Ø Study done by Kolbianki et.al,2005 showed that there is no significant difference in oocyte maturity and embryo quality. However there is significantly lower implantation rate, clinical pregnancy and higher early pregnancy loss was seen in GnRH-a group.
- Ø Study done by Humaidan et.al., 2005 showed that there is significantly higher matured oocytes upon trigger with GnRH-a.. However there is significantly lower in implantation and clinical pregnancy rate in GnRH-a group.
- Ø Article review by Alyasin et.al, 2016 concluded that there is no significant difference in fertility outcome between group trigger with HCG and GnRH-a and in fact helps to lower the risk of OHSS.

## CONCLUSION

- Ø There is no significant difference between matured oocyte collected when trigger with Ovidrel™ and Decapeptyl™ ( $85.3\%$  vs  $83.4\%$ ;  $p=0.507$ ).
- Ø There is no significant difference between number of good quality embryos ( $3.5 \pm 2.3$  vs  $4.8 \pm 3.9$ ;  $p=0.402$ ).
- Ø There is no significant difference between clinical pregnancy ( $24.4\%$  vs  $24.7\%$ ;  $p=0.562$ ).
- Ø Triggering ovulation by Decapeptyl™ results in comparable cycle outcome as compare with Ovidrel™ in a patient with normal or low responder.

## REFERENCES

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