The Correlation between serum endocrine gland derived vascular endothelial growth factor and liquid of ovarian follicles with the size and amount of follicles in patients of in vitro fertilization

Janwar Nasution, Delfi Lutan, Binarwan Halim

Department of Obstetrics and Gynecology, Faculty of Medicine, University of North Sumatera, H. Adam Malik Central General Hospital, Medan

Abstract

Objective: To find out the correlation between the level of serum EG-VEGF with the size and amount of follicles in patients who would be given an In Vitro Fertilization (IVF) action in The Halim’s Clinic of Fertility.

Location: The research was carried out in the Halim’s Fertility Center, Endocrinology subdivision Department of Obstetrics and Gynecology, H. Adam Malik Central General Hospital.

Design: “cross sectional” by the method of observational analytic approach.

Method: collecting samples through by consecutive sampling with the establishment of inclusion dan exclusion criteria until the number of minimum samples were fulfilled. The data were showed in the form of average level (Mean) and standard deviation (SD). The analytic statistics used were Correlation Test in a Pearson’s linear regression model (numeric variable). The selection of test depends on the variable types correlated. The comparative analysis of numeric variables (Diameter measurement of follicles, number of follicles and serum level of EG-VEGF) unpaired using t-independent test.

Results: The characteristics of research samples obtained is that 29 patients who were samples of this research had an average age of 34 years old with the standard deviation of 5,07. All patients had an average body mass index of 24,08 kg/m², with measurement deviation of 3,72. The average for each level of EG-VEGF, which was 14,19 dan 3593,58 with standard deviation 9,67 and 878,55. Had a follicle diameter 10-21 mm, overall mean of respondents had 10,72 number of follicles with standard deviation of 0,48.

There was no association between the diameter of follicles with the serum and follicles level VEGF. $p > 0,05$ which means there was not enough evidence to state that both variables have a significant correlation.

From the t-independent test, p-value was 0,000 (<0,05) showing that between the serum level and the follicle level have a mean EG-VEGF which is significantly different in confidence interval of 95%.

Conclusion:

The larger and the lot size of diameter and number of follicles had no effect on serum and follicular fluid level of EG-VEGF, this is because the expression of EG-VEGF is not only localized in granulosa and thecaovarian

Keywords: EG-VEGF, IVF, Ovarian Follicle Fluid, Infertility.