

ABSTRAK**Correlation Analysis of Urine and Serum Estradiol Level and their Contribution to the diagnosis of Follicular Maturity of In Vitro Fertilization (IVF) Patients with Controlled Ovarian Hyperstimulation (COH) Therapy****ARROOFITA ANI SANDIYA**

Background: One of the stages in the In Vitro Fertilization technique is the prospective mother will be given hormonal drugs as a trigger for ovulation to produce many eggs. This stage is called ovarian stimulation or Controlled Ovarian Hyperstimulation (COH). During the menstrual cycle stimulated by the COH procedure, blood steroid hormone levels increase as a result of the development of multiple ovarian follicles. In hormone excretion, the hormone will experience conjugation with sulfate or glucuronide derivatives to become hydrophilic compounds, then eventually it will be secreted through urine or feces.

Objective: : This study aims to determine estrogen levels in urine in patients with ovarian stimulation therapy. Performed on 40 women and urine samples of patients

Materials and Methods: This study were analyzed by ELISA.

Results: The analysis of estradiol levels in urine and serum samples showed that the average urinary estradiol levels before COH therapy with urinary estradiol levels after COH therapy yielded $16,650 \text{ ng / L} \pm 5,767$ and $16,517 \text{ ng / L} \pm 5,617$ respectively. Mature follicles are characterized by follicular diameters reaching $> 16 \text{ mm}$ with a minimum number of 3 follicles. In this study the correlation coefficient value of urinary estradiol with the number of mature follicles was obtained. The results of the correlation coefficient were -0.223 and the significance value (2-tailed) of $0.204 > 0.05$.

Conclusions: In this study it can be concluded that there is no correlation between estradiol levels before COH and after COH in urine samples, and estradiol levels in urine samples are not able to describe the level of follicular maturity.

Keywords: 17β -estradiol, urine Estradiol, In Vitro Fertilization, Ovarian Stimulation, Controlled Ovarian Hyperstimulation (COH), ELISA.