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# Fibrinolytic Activity in Woman with Polycystic Ovary Syndrome (PCOS)

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Context
Polycystic Ovarian Syndrome (PCOS) is a dysfunction of ovarium with polycystic ovarian morphology and hyperandrogenism state. Woman with PCOS tend to have increased risk of miscarriage compared with woman without PCOS. Hemostatic disorder and Fibrinolytic activity associated with the incidence of miscarriage. Fibrinogen and D-dimer are hemostatic parameters. Fibrinogen considered as an independent risk factor for cardiovascular disease. D-dimer, final product of cross-linked fibrin degeneration by plasmin in fibrinolytic system, also contributes to cardiovascular and miscarriage risk especially in PCOS patient.
Objective
To assess the difference of fibrinolytic activity especially fibrinogen and D-dimer level between women with PCOS and without PCOS.
Methods
This study was a prospective comparative analytic study of patients with PCOS and without PCOS from March to July 2014 in Haji Adam Malik General Hospital and Halim Fertility Center was done.
Patient(s)
in all, 30 women with PCOS and 30 normal women taken with consecutive sampling method in women aged 20-35 years and had approved an informed consent. The inclusion criteria was woman with PCOS which determined based on the Rotterdam 2003 criteria in the diagnosis of PCOS (oligo- or anovulation, clinical and/or biochemical signs of hyperandrogenism, and polycystic ovaries), did not suffer from diabetes, thyroid disease, cushing's syndrome, congenital adrenal hyperplasia and hyperprolactinemia, did not use oral contraceptives in the last 3 months, long-term consumption of vitamins, sepsis, hematoma, consumption of anticoagulants, suffering from hepatitis, DVT, DIC, history of trauma. Exclusion criteria was when the blood sample was damaged.
Intervention(s)
Patients were examined fibrinogen and D-dimer from blood sampling when diagnosed with PCOS.
Main Outcome Measure(s)
Fibrinogen level and D-dimer level in PCOS patient and without PCOS.
Result(s)
From 60 study subjects, which divided equally into two groups, women with PCOS and without PCOS, mean level of fibrinogen in women with PCOS (289.1Â±65.8 mg/dL) was slightly lower than women without PCOS (301.9Â±57.8 mg/dL) with p>0.05. Mean level of D-Dimer in women with PCOS was lower (148.6Â±51.3 ng/mL) than control (193.3Â±103.9 ng/mL) with p<0.05.
Conclusions

Mean level of D-dimer in women with PCOS is significantly lower than without PCOS. Women with PCOS tend to have lower fibrinolytic activity that related to miscarriage.

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