Evaluate the effect of Metformin treatment on homocystein, lipid profile, and C – reactive protein as atherosclerotic marker in patients with polycystic ovarian syndrome

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Background: Polycystic ovary syndrome (PCOS) has a diverse range of the causes that are not entirely understood, but there is evidence that it is largely a genetic disease. The most common immediate symptoms are anovulation, excess androgenic hormones, and the insulin resistance. Insulin resistance is associated with obesity, type 2 diabetes, and high cholesterol level. The severity of PCOS symptoms appears to be largely determined by factors such as obesity. Reducing insulin resistance by improving insulin sensitivity through a medication such as metformin seems to show effectiveness. The dyslipidemia may occur independently of obesity, however there is synergistic delicious effect of obesity and insulin resistance in PCOS analogues to that seen in type 2 diabetes. Serum levels of C-reactive protein avascular inflammatory marker, may predict the development of cardiovascular disease. And within the last years has homocystein taken its place among other major risk factors such as cholesterol, and obesity.

Aim: The aim of this study was to assess the level of homocystein, lipid profile, and C-reactive protein in PCOS patients before and after three months of treatment with metformin.

Methods: This study including sixty-one PCOS patients were recruited from the gynecological out patient’s clinic of Kirkuk General Hospital from January to September 2016. Thirty patients from them received metformin as only treatment for three months.

Results: There was a significant decrease in serum level of total cholesterol, LDL, and CRP, but non-significant change in the serum homocystein, TG, HDL, and VLDL after treatment with metformin.

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