

## METHYL TETRAHYDROFOLATE REDUCTASE POLYMORPHISM , FOLIC ACID, B12 IN A SAMPLE OF PATIENTS WITH DEPRESSIVE AND ANXIETY SYMPTOMS

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**Introduction:** There are several theories concerning potential associations between depression and levels of vitamin B12 and folate.

**Aim of the study:** To investigate the relationship between depression and vitamin B12, folate, and the methylenetetrahydrofolate reductase 677C T polymorphism. To compare this associations, in anxiety and depression.

**Subjects and methods:** 90 subjects were randomly selected in a comparative cross sectional study. The sample consists of three groups: a group of depressive disorders without psychotic symptoms (n=30), a group of anxiety disorders (n=30) and control group (n=30). The patients were recruited from psychiatric out- patient clinic. Patients were diagnosed according to DSMIV criteria. Beck depression Inventory for severity of depression, Hamilton rating scale of depression, Hamilton rating scale of anxiety. Laboratory: Simultaneous assay of vitamin B12 and folic acid by Radio-immune assay technique and analysis of MTHFR (C677T) by means of PCR and RFLP.

**Results:** Both anxiety and depression groups has the same percentage of gene mutation (33.3%). Folic acid and Vitamin B 12 mean values were highest in control group followed by the anxiety group then the least was in depression. Within the depression group there is a negative correlation between the severity of depression and folic acid. Within the depression group, patients with mutant gene have lower level of both Folic acid and Vitamin B12 than patients with non mutant gene.

**Conclusion:** Folic acid and Vitamin B12 were lower than normal in both anxiety and depression patients and this was combined with gene mutation.