**EFFECT OF SUPPLEMENTATION OF FOLIC ACID & VITAMIN B12 ON CARDIOVASCULAR MORTALITY & HYPERHOMOCYSTEINEMIA IN CHRONIC KIDNEY DISEASE**

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Objective: Cardiovascular disease (CVD) mortality is 16 times more in cases of chronic kidney disease (CKD). Elevated plasma homocysteine is an important risk factor for increased cardiovascular morbidity and mortality. The present study was undertaken to see homocysteine levels in CKD and effect of folic acid and B12 supplementation on homocysteine and cardiovascular outcome.

Methods: A randomized placebo controlled trial on 100 cases was carried out at tertiary care hospital from May 2009 to November 2010. Adult patient of CKD having glomerular filtration rate (GFR) <60ml/min were enrolled for the study. Patients were randomly assigned into two groups. Control group was given placebo and interventional group was given folic acid and vitamin B12 supplementation for 6 months.

Results: Mean baseline homocysteine levels were similar in two groups. It was 32.61 µmol/L in the interventional group and 29.48 µmol/L in the placebo group (p >0.05). The level decreased significantly to 19.69 µmol/L (p<0.001) in the interventional group and it increased to 34.41µmol/L (p>0.05) in the placebo group after 6 months. The homocysteine level had a negative co-relation with haemoglobin (r= -0.19), GFR

(r= - 0.16), folic acid (r= -0.19) and vitamin B12 (r= -0.35). There was no significant effect on total mortality, deaths due to CVD, total ischemic event, hospitalization due to unstable angina, heart failure or venous thrombotic events after 6 months of supplementation therapy.

Conclusion: Serum homocysteine is elevated in patients of CKD. Folic acid and vitamin B12 supplementation lowered homocysteine, but it did not reduce cardiovascular disease mortality.