C677T POLYMORPHISM OF THE METHYLENETETRAHYDROFOLATE REDUCTASE GENE IN POSTMENOPAUSAL WOMEN SCREENED FOR THE METABOLIC SYNDROME

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The metabolic syndrome (METS) is a cluster of lipid and non-lipid factors that increases cardiovascular risk. Prevalence increases after the menopause with 52.7% of postmenopausal women (median age 56 yrs) presenting the syndrome (according to modified ATP-III criteria). Single-nucleotide polymorphisms (SNPs) of the methylenetetrahydrofolate reductase (MTHFR) gene have been linked to cardiovascular risk. We recently tested the C677T SNP of the MTHFR gene in two hundred and three postmenopausal women screened for the METS. Overall the TT genotype (homozygous) prevailed in 12.8% (n=203) with no prevalence difference observed when METS women were compared to non METS ones. Same trend was observed when the prevalence of the C677T SNP genotypes were compared among women presenting or not each of the composing items of the METS except for those with high triglyceride levels who displayed a higher rate of the CT genotype (heterozygous). The present lecture will discuss genetic alterations of the MTHFR gene in relation to the METS and cardiovascular risk in postmenopausal women.