A-28 Hyperhomocysteinemia in healthy adult Sri Lankans

Shanthi Mendis[1], M A C K A Nazar[1], S B P Athauda[2], Kenji Takashi[3]
[1] *Dept of Medicine* [2] *Dept of Biochemistry, Faculty of Medicine, University of Peradeniya* *Dept of Molecular Biochemistry, Tokyo University, Japan*

Fasting serum homocysteine and its metabolites (cysteine cysteinylglycine and glutathione) were measured in a sample of 80 healthy adults (36 males) 30 - 65 years of age, randomly selected from one Grama Niladari Division in the Yatinuwara electorate. 33% (26) of the subjects were currently smoking. They were not on any medications.

The mean (SD) homocysteine, cysteine, cysteinylglycine and glutathione levels were 17.9 (8.5), 264.5 (71.8), 41.1 (9.6) and 2.8 (2.7) mmol/l. There was no significant correlation between age and homocysteine, cysteine, cysteinylglycine and glutathione levels and no significant difference in these parameters between males and females.

Serum homocysteine (21.2 mmol/l SD 9.8) and cysteine (292.2 mmol/l SD 83.1) levels were significantly higher in smokers compared to serum homocysteine (16.4 mmol/l SD 7.4) and cysteine (251.2 mmol/l SD 62.2) levels in non smokers ($p < 0.05$). There was no significant difference between serum cysteinylglycine and glutathione levels between smokers and nonsmokers. The 90th percentile for serum homocysteine level was 28.5 mmol/l.

This study is the first to analyse homocysteine and its metabolites in a sample of healthy rural adult Sri Lankans. Homocysteine and cysteine levels were significantly higher in smokers compared to non smokers. Up to now there is no consensus about reference values for plasma homocysteine concentrations. The cut off point at the 90th percentile for this sample of subjects drawn from the general population is 28.5 mmol./1. This is much higher than the reference value of 14 mmol/l (90th percentile) quoted for some Western populations.