

C-E-6

Correlation Between Serum C-Reactive Protein Level and Endothelial Function in Patients with Type 2 Diabetes Mellitus

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Introduction: Epidemiological studies have shown that C-reactive protein (CRP) is an independent risk factor for cardiovascular disease, and a small increase in its serum level is associated with increased risk of coronary heart disease. Experimental studies have shown a relationship between chronic inflammation and reduced nitric oxide synthesis, suggesting that endothelial dysfunction may be a possible link between inflammation and atherosclerosis. We have measured serum CRP in patients with type 2 diabetes mellitus (DM) and controls, and determined its correlation with endothelial function *in vivo*.

Methods: Eighty patients with type 2 DM and 80 age and sex-matched controls were recruited. High sensitivity C-reactive protein (CRP) was measured by immunoturbidimetric assay. Endothelial function was assessed by high resolution vascular ultrasound.

Results: Serum CRP was significantly higher in the diabetic patients than controls (median {interquartile range}) 1.75 mg/l {2.74} vs 0.86 {1.71}, $p < 0.01$. Diabetic patients had impaired endothelium-dependent (mean \pm SD: $5.2\% \pm 2.5$ vs 9.2 ± 4.3 , $p < 0.01$) and independent vasodilation ($13.6\% \pm 4.9$ vs 16.9 ± 5.5 , $p < 0.01$) compared to non-diabetic controls. Endothelium-dependent vasodilation correlated inversely with CRP ($r = -0.21$, $p < 0.01$) whereas no correlation was found between endothelium-independent vasodilation and CRP.

Conclusion: The association between serum CRP and impairment of endothelium-dependent vasodilation suggested that low grade chronic inflammation might contribute to endothelial dysfunction in patients with type 2 diabetes mellitus, and linked to their accelerated atherosclerosis.

C-F-1

Is Quality of Life a Sensitive Outcome Measure for Dyspepsia Treatment?

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Introduction: Previous studies showed that there was little difference between endoscopic guided, *Helicobacter* test & treat and empirical cisapride treatments for the relief of symptoms of dyspepsia. Change in quality of life (QOL) may be a sensitive outcome measure of treatment effectiveness for dyspepsia because it is a functional disorder. The aim of this study was to find out if quality of life measured by the SF-36 is sensitive in detecting any difference in the effectiveness between different treatment approaches.

Methods: 234 patients presenting to the GOPD with dyspepsia were randomised into three treatment groups: the first received treatment guided by an OGD endoscopy; the second received a carbon 13 urease breath test and then triple therapy if *H. pylori* (HP) was positive and cisapride if HP was negative; and the third was treated with empirical cisapride. QOL of the subjects were measured by the SF-36 Health survey at presentation and 6 weeks later. Changes in the SF-36 physical (PCS) and mental (MCS) component QOL summary scores were used as outcome measures on the effectiveness of each treatment method. Differences in the mean and change in PCS and MCS scores were tested by the appropriate *t* tests.

Results: The PCS score significantly improved in all three treatment groups (by 0.36 SD, 0.39 SD and 0.54 SD for the endoscopy, HP and cisapride groups, respectively), but the improvement in the MCS score was significant for the HP group only (by 0.38 SD). The difference in the change in the MCS score in the HP group was greater than those in the other two groups and was statistically significant compared to the cisapride group.

Conclusions: Quality of life is a sensitive outcome measure for dyspepsia treatment and was able to detect a difference in the effectiveness between treatment methods that might not be detectable by traditional clinical outcomes.