The Impact of Folic Acid and Vitamin B12 Supplementation on Blood Pressure and Arterial Stiffness in Subjects with Subnormal Micronutrient Intake

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Introduction: Folic acid (FA) supplementation improves atherogenic processes in coronary and asymptomatic sub-
jects, but its impact on blood pressure and arterial stiffness remains unknown.

Methods: 207 asymptomatic subjects aged 45–85 years in rural northern China were randomised to take FA (5 mg/day), vitamin B12 (50 µg/day), B12 + FA or placebo in double-blinded design for 6 months, followed by open-label B12 + FA for 6 more months. Radial artery stiffness index (AI) and pulse wave velocity (PWV) were measured by sphygmoCor.

Results: Blood-B12 and folate levels were low at baseline but significantly increased after FA, B12 and B12 + FA, and not after placebo treatment, while fasting homocysteine decreased significantly after FA, and B12 + FA treatments (p < 0.001). Systolic (SBP) or diastolic pressures (DBP) decreased marginally (p < 0.05) during placebo and all three active treatment periods (p < 0.001). There was no significant change in AI or PWV.

Compared with baseline: ∗p < 0.05, **p < 0.01, ***p < 0.001.
Sustained decrease in SBP (p < 0.001) and DBP (p < 0.001) were observed after open-label FA + B12 treatment, associated with a significant decrease in AI (24% 22% to DBP 22% 20% → p < 0.001).

Conclusion: Long-term FA and B12 supplementation improves blood pressure and arterial stiffness in subjects with subnormal intake.

doi: 10.1016/j.hlc.2008.05.109

Coronary Heart Disease in New Zealand 2001–2003: Estimates of Incidence and Prevalence Based on Routinely Collected Data

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Introduction: Carukia Barseni (also known as Irukandji) is a type of box jelly fish unique to North Queensland. We present a case series of irukandji syndrome which presented to Cairns Base Hospital recently.

Method/Design: Consent was obtained by all subjects. Regular observations were performed, baseline electrocardiograms, serial serum troponins and differential white cell counts. Serial transthoracic echocardiograms were performed in cases of positive troponins.

doi: 10.1016/j.hlc.2008.05.200

200 Irukandji Syndrome, Cause for Troponin Leak and Stress Cardiomyopathy

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Angiotensin-Converting Enzyme Inhibition Reduces Left Ventricular Outflow-tract Diameter in Marfan Syndrome: Potential Role of Reduced Transforming Growth Factor-β Signalling

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Background: We have previously shown that the angiotensin-converting enzyme (ACE) inhibitor perindopril reduced aortic diameter by 3–7 mm in Marfan syndrome (MFS) patients. We hypothesised that reduction in aortic diameter would correlate with reduction in plasma TGF-β and MMP levels.

Methods: 17 MFS patients (aged 28 ± 5 mean ± S.D.) were randomised to receive either perindopril (8 mg od, n = 7) or placebo (n = 10) for 24 weeks in a double blind study. Platelet-activated endocarditis (38% vs. 28%; p = 0.01), active TGF-β levels by 4.1 ng/ml (placebo, 1 ± 1 ng/ml, p = 0.01), and MMP-3 levels by 2.3 ng/ml (placebo, 2.3 ± 1 ng/ml, p = 0.01), There were moderately strong correlations between the percent intervention change in LVOT diameter and the change in both latent (r = 0.49, p = 0.01) and active TGF-β (r = 0.74, p = 0.002), MMP-2 (r = 0.75, p = 0.001), and MMP-3 plasma levels (r = 0.81, p = 0.001).

Conclusion: ACE-inhibition reduced LVOT-diameter in MFS patients, possibly through attenuation of TGF-β signalling. Plasma-TGF-β could be a useful prognostic indicator of progression of aortic dilatation and response to therapy in MFS.

doi:10.1016/j.hlc.2008.05.201

203 Outcome & Prognostic Factors on 57 Cases Of Infective Endocarditis in a Single Center

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A single-center retrospective review of all cases of IE for a specific period from June 2005. There were 57 episodes of IE in 47 patients. Seventy percent were definite IE using modified Duke Criteria (2000). Forty-five episodes were native valve endocarditis, the remaining were prosthetic-valve endocarditis and one case of pacemaker lead endocarditis. The mitral valve was most commonly involved. Mean age was 56 with bimodal peak at age group 21–30 and 81–90. The most commonly isolated organisms were Streptococci (47%) and Staphylococcus aureus (22%). Forty-nine percent of patients remained event-free (survive without recurrence or operation) at the end of follow-up period. Eight patients had recurrent endocarditis within the study period. Five cases (8.5%) had early recurrence of endocarditis within 60 days. Twelve patients (21%) died during follow-up (mean 14 months). There was no significant increase in mortality of patients with history of recurrent endocarditis (18% vs. 28% p = 0.39). Staphylococcus aureus was associated with increased mortality or need for valve surgery (OR 1.56; CI 1.28–1.86). Risk of neurological events (OR 8.9; 1.5–52), renal failure (OR 7.7; 1.7–30) and thromboembolism (OR 5.0; 1.5–17). Haematological parameters, renal function or inflammatory markers were not shown to be predictive of increased mortality or need for valve surgery.

Conclusion:

1 The mortality of IE remains high. Less than half of this cohort remained event-free.
2 The microorganism involved is more predictive of mortality or need for surgery than recurrent endocarditis.