breathing techniques (CMBT) on stress and exercise induced high blood pressure (BP). CMBT was performed according to the Christian tradition.

Methods: 52 patients (age 30-70 y, 18 female) with mild to moderate primary hypertension (JNC7 criteria) were randomized into two groups. Group I (n=26) practised intensive CMBT (30 minutes, twice a day) for 8 weeks whereas group II (n=26) served as control. At baseline and follow-up, resting BP (mean of 3 recordings), a standardized computerized 30 min mental stress test, bicycle ergometry, and ambulatory blood pressure measurement (ABPM) was performed.

Results: In group I, resting systolic BP fell from 151 to 136 mmHg after CMBT (p<0.001). There was a 11 % decrease in systolic BP in group I compared to 0 % in group II (p<0.001). Mean systolic BP during mental stress decreased from 170 to 143 mmHg (p<0.001) in group I, but remained constant in controls, 163 vs.157 mmHg; (p<0.001 for comparison between groups). Maximal systolic BP during exercise fell from 218 mmHg to 199 mmHg after CMBT in group I, p<0.001, but remained constant in group 2, 211 vs. 209 mmHg, (p=n.s. for comparison between groups). Mean systolic and diastolic BP during ABPM fell from 137 to 133 mmHg (p<0.001) and 85 to 80 mmHg (p<0.001) for comparison between groups.

Conclusion: This is the first randomized study showing that CMBT effectively reduces basal and stress induced high BP in subjects with mild to moderate essential hypertension. Further studies will investigate the persistence of CMBT mediated effects and its use as complementary add-on to drug therapy for a holistic approach to the patient with arterial hypertension.

Key Words: Contemplative Mindful Meditation, Preventive Clinical Trial, Stress Induced Hypertension

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A RANDOMISED CONTROLLED TRIAL OF PATIENT HELD TARGETS AND SELF MONITORING IN THE CONTROL OF HYPERTENSION

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Introduction: Most patients with hypertension, in most countries, remain poorly controlled despite high health care costs. One intervention which may improve blood pressure control at minimal cost is greater patient involvement in their own care. The Targets and Self Monitoring in Hypertension (TASMINH) study was the first UK randomised controlled trial of patient self monitoring in hypertension and the first anywhere to evaluate self monitoring in a community clinic setting.

Method: 441 people receiving treatment in primary care for high blood pressure but not controlled below target (>139/84 mmHg) were randomised between intervention and usual care. Patients in the intervention group received treatment targets along with facilities to measure their blood pressure in the practice waiting room. They were asked to vary follow up with the Primary Care Physician / Practice Nurse depending on whether or not their blood pressure was below target. The primary outcome was change in systolic blood pressure (SBP) at six months and one year and the study was powered to detect a 5 mmHg difference. Cost data were collected in parallel to trial outcome data.

Results: 400 (91%) of patients attended follow up at 1 year. There was a significant reduction in systolic blood pressure in the intervention group compared to usual care after six months (mean difference in SBP 4.3 mmHg [95% CI 0.8, 7.9]) but not one year (mean difference in SBP 2.7 mmHg [95% CI –1.2, 6.6]). No difference was seen in diastolic blood pressure, anxiety, explanatory health behaviours or number of prescribed medication. Patients who self monitored lost more weight than control, rated self monitoring above professional monitoring and attended professionals less often. Self monitoring did not cost significantly more than standard care: incremental cost effectiveness ratio $9.76/mmHg (95% CI –13.78, 36.55).

Conclusion: Practice based self monitoring resulted in small but significant improvements of blood pressure at six months which were not sustained after a year. Self monitoring was well received by patients, there was no increase in anxiety and no additional cost. Practice based self monitoring is feasible, cost effective and results in equivalent control to usual care.

Key Words: Hypertension, Primary Care / Family Practice, Self Management

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WEIGHT CHANGES AND INSULIN SENSITIVITY NOT ALL BETABLOCKERS ARE CREATED EQUAL

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Being overweight is a common complication of hypertensive cardiovascular disease and diabetes (DM). Drugs that promote weight gain or make it difficult to lose weight are a concern in susceptible patients (pts). Beta-blocker therapy causes a systematic weight gain of over 1 kilogram on average (Sharma et al. Hypertension 2001;37:50).

In the prospective double-blind, randomized GEMINI study, pts with DM and SBP >130 <179 mmHg and DBP >80 <109 mmHg on ACE/ARB, were randomized to carvedilol (C) 6.25-25 mg bid (n=498) or metoprolol tartrate (M) 50-200 mg bid (n=737), and followed for 5 months. 456 C and 650 M pts had weight values at both baseline (BL) and endpoint. BL weights were (mean [sd], SD) for C 97.5, 20.1 and for M 96.6, 20.9. Treatment difference in mean weight change (D) from BL (C vs M: se) was -1.02±0.21 kg, p=0.0001, 95%CI (-1.43, -0.60). Pts on M had significant weight gain (mean ±se 1.19±0.16; p<0.001) vs no D on C (mean±se; 0.17±0.19; p=0.36). Pairwise correlation analyses of weight D vs Δ HbA1c, HOMA-IR, SBP, and DBP are shown below.

No significant associations were seen between change from BL in Δ HbA1c, HOMA-IR, SBP, or DBP and weight change. We previously reported improvements in insulin sensitivity and glycemic control with C, but not with M (Bakris et al. JAMA 2004;292:2227). Weight changes in pts taking C vs M may, at least to some extent, account for the beneficial effects on glycemic control. The changes in insulin sensitivity may be independent of weight and due to inherent drug effect.

Key Words: Beta-Blockers, Insulin Sensitivity, Weight Change

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TELMISARTAN + HYDROCHLOROTHIAZIDE VERSUS AMLODIPINE + HYDROCHLOROTHIAZIDE IN OLDER PATIENTS WITH PROMINENTLY SYSTOLIC HYPERTENSION

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Background: Sustained blood pressure control is important to reduce cardiovascular and cerebrovascular risk in the elderly.