Chapter 6

Treatment for hypertension in menopause

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Estimates are that 130 million Western women are currently not treated adequately for hypertension. In the next 20 years that number is expected to climb to 160 million.[1] However, the global population is anticipated extending from 6.6 billion these days to 9.4 billion by the year 2050. There will be a considerable the rise for individual age, one billion of which is able to be women in post-menopausal status.[2]

5.1 Global consideration

Elderlyremains one among the foremost necessary determinants of postmenopausal high blood pressure,[3, 4] however the increasing incidence of fatness, that is commonly correlate to an absence of physical activity, can terribly seemingly cause a rise in cardiovascular morbidity within the future.[5] Peri-menopausal and post-menopausal women ought to assess CV risks factor by their medical aid doctor and their gynaecologist frequently.[6] Physicians ought to encourage a healthier life-style for all their patients to stop high blood pressure. This could embrace consumption an occasional fat diet which contains several fruits and vegetables, losing weight, maintaining regular physical activity, stopping smoking, and drinking alcohol moderately.[6]

Hormonal therapy (HT) is not suggested for postmenopausal women with high blood Pressure (BP) or those in danger for cardiovascular disease.[7] The advantages of HT ought to be weighed against potential risks once treating younger, perimenopausal women with menopausal symptoms. The practician ought to rigorously select the kind of HT prescribed.[7] Hypertensive postmenopausal women could have the benefit of drospirenone, a unique progestogen with corticosteroid antagonist activities, that has shown to reduce pressure level during this group once combined with 17β-estradiol.[8] This new medical care could supply benefits for postmenopausal with high BP, World Health Organization need progestogen medical care for female internal reproductive organ protection throughout HT for menopausal symptoms.[7]

The U.S. guideline for treating arterial high BP (the 7th Report of the Joint National Committee on Prevention, Detection, Evaluation, and Therapy of BP) advocate an utilization of diuretic drug as a first line agent for the most patients perhaps the target pressure level could not achieve with life-style change alone.[6] Salt restriction is the high prevalence of to control high BP in post-menopausal women.[6] Reducing Na dietary and employing a thiazide diuretic drug nay improve BP level and conjointly cut back later cardiovascular complications of high blood pressure.[6] Apparently, dietary salt restriction features a larger medication impact in older women than in men.[9] This strengthens the argument in favour of an unhealthful roles that for produce endogenous oestrogen within the pathologic process of salt sensitivity.[10]

Once target BP could not achieve by an utilization of one medication and life-style changes, an additional of a 2nd drug from a distinct class ought to start.[6] These could be a huge importance for postmenopausal women with metabolic syndrome. World Health Organization typically present with an additional intensity for CV risk profiles and showed a little favors response to antihypertensive drug than their lean counterparts.[11] The utilization of hypertensive converting enzyme inhibitor and angiotensin receptor blocker have planned

in this context.[7] Apparently, a little study involving fifty one post-menopausal HT women, incontestable recently that BP lowering, were result of angiotension receptors blockers. Irbesartan was increased by 17β-oestradiol[12].

5.2 Relaxation for hypertension in menopause

There was a statistically significant reduction in both SBP and DBP affirmative relaxation interventions.[13-18] One trial found a significant reduction in SBP alone[19] and 2 trials reported a significant reduction in DBP alone.[20, 21]In an exceedingly meta-analysis, involving 1,198 participants, relaxation was related to statistically significant reductions in both SBP [mean difference (MD): -5.5 mmHg, 95% CI: -8.2 to -2.8] and DBP (MD: -3.5 mmHg, 95% CI: -5.3 to -1.6) compared to control.

A systematic review of relaxation therapies for the management of primary high blood pressure in 590 participants with less than half dozen months follow up showed that relaxation was related to statistically significant reductions in both SBP (MD: -7.1 mmHg, 95%CI: -11.4 to -2.8) and DBP (MD: -5.1 mmHg, 95%CI: -8.4 to -1.9). Another trial with a follow-up time of half-dozen months or longer, involving 608 participants, showed that relaxation was related to slightly smaller however still statistically significant reductions in both SBP (MD: -4.0 mmHg, 95%CI: -7.6 to -0.5) and DBP (MD: -1.9 mmHg, 95%CI: -3.8 to -0.1). Within the comparisons of relaxation with a control group receiving phoney medical care, that assessed 564 participants, relaxation was related to a non-significant reduction in both SBP (MD: -3.5 mmHg, 95%CI: -7.1 to 0.2) and DBP (MD: -1.8 mmHg, 95% CI: -4.4 to 0.8). The results of comparisons of relaxation with a control group not receiving any active intervention, that assessed 634 participants, found that relaxation was related to a bigger, statistically significant reduction in both SBP (MD: -7.7 mmHg, 95% CI: -11.2 to -4.2) and DBP (MD: -5.3 mmHg, 95% CI: -7.7 to -2.8) compared to control. Another study, that compared progressive muscle relaxation (PMR) with control in 699 participants, found that PMR was related to a significant reduction in both SBP (MD: -4.8 mmHg, 95% CI: -7.2 to -2.4) and DBP (MD: -2.8 mmHg, 95% CI: -4.8 to -0.9).[13-21]

In these trials, the rates of adverse events were regarding third and 4wd within the relaxation and management control, respectively. A meta-analysis showed no significant distinction within the rate of uncontrolled high blood pressure within the relaxation and control groups (risk difference = 0.00, 95%CI: -0.05 to 0.04). The rate of withdrawal was 13 and 9/11 within the relaxation and control groups, respectively, that showed no significant difference (risk difference = 0.03, 95%CI: -0.03 to 0.09). In another meta-analysis, the rate of loss to follow-up was 16% and 15% within the relaxation and control groups, respectively. The rate of loss to follow-up showed no significant difference within the within the 2 groups (risk difference = 0.01, 95%CI: -0.07 to 0.09.[16, 18, 22, 23]

A single-blind RCT was performed at a medical aid, inner-city health facility to assess the short-term (3 months of follow-up) effectiveness and practicability of delicate high blood pressure treatment in older African American, aged 55-70 years. Out of 213 African American men and women screened, 127 people with associate initial DBP of 90 to 109 mmHg, SBP of ≤189 mmHg, and final baseline BP of ≤179/104 mmHg were recruited into the

study. Of these, 16 did not complete their follow-ups for BP measurements. Transcendental Meditation (TM) and progressive muscle relaxation (PMR) were compared with a life-style modification education management program and with one another. The results showed that TM reduced SBP by 10.7 mmHg (P<0.0003) and DBP by 6.4 mmHg (P<0.00005), whereas PMR lowered SBP by 4.7 mmHg (P=.054) and DBP by 3.3 mmHg (P<.02). The BP reductions within the TM group were considerably larger than within the PMR group for both SBP (P=.02) and DBP (P=.03). Compliance was high in each group. Home pulsation, however not diastolic pressure, changes were almost like clinic changes. It absolutely was all over that chosen mental and physical stress-reduction techniques demonstrated effectiveness in reducing mild HT during this sample of older African Americans. Of the 2 techniques, TM was more or less double as effective as PMR.[24] Another community trial in northern Taiwan recruited 590 hypertensive subjects known from 3,128 adults at a screening survey in 50 communities, that were chosen randomly. Subjects were invited to participate within the study, and were at random allotted to 3 treatment modalities: (a) relaxation techniques to be practiced at home, (b) routine BP measuring by a health care provider, and (c) reading self-learning packages (control group). The results showed that after a 2-month period, the relaxation group had the foremost significant reduction in SBP levels (11.0 mmHg), followed by the routine BP monitoring group (9.2 mmHg) and also the self-learning group (5.1 mmHg).[25]

In conclusions from previous studies, there were lacks of effectuality of relaxation techniques for the treatment of primary high blood pressure. Indeed, there was substantial variation in treatment effects among totally different populations. Some types of relaxation therapies could also be effective in bound population groups. It absolutely was still unfeasible to identify the characteristics of patients in whom the intervention was seemingly to be effective. Additionally, some reduction in blood pressure might be attributable to nonspecific effects of treatment, like frequent contact with health care providers. The methodological quality of previous relaxation trials for high blood pressure treatment in postmenopause women was still questionable. Additional good-quality studies, with a bigger sample sizes drawn from representative populations, were required to clarify this vital issue.

A systematic review of intervention reported that systolic BP (SBP) was reduced once endurance (−3.5 mmHg [confidence limits −4.6 to −2.3]), dynamic resistance (−1.8 mmHg [−3.7 to −0.011]), and isometric resistance (−10.9 mm hg [−14.5 to −7.4]) however not when combined coaching. Reductions in diastolic BP (DBP) were ascertained after endurance (−2.5 mmHg [−3.2 to −1.7]), dynamic resistance (−3.2 mmHg [−4.5 to −2.0]), isometric resistance (−6.2 mmHg [−10.3 to −2.0]), and combined (−2.2 mmHg [−3.9 to −0.48]) training. BP reductions once endurance coaching were larger (P<0.0001) in 26 study groups of hypertensive subjects (−8.3 [−10.7 to −6.0]/−5.2 [−6.8 to −3.4] mmHg) than in 50 groups of prehypertensive subjects (−2.1 [−3.3 to −0.83]/−1.7 [−2.7 to −0.68]) and 29 groups of subjects with normal BP levels (−0.75 [−2.2 to +0.69]/−1.1 [−2.2 to −0.068]). BP reductions when dynamic resistance coaching was largest for prehypertensive participants (−4.0 [−7.4 to −0.5]/−3.8 [−5.7 to −1.9] mm Hg) compared with patients with high blood pressure or normal BP. This proof demonstrates that endurance, dynamic resistance, and isometric

resistance coaching lower SBP and DBP, whereas combined coaching lowers only DBP. However, information from alittle range of isometric resistance coaching studies recommended this way of coaching had the very best potential for SBP reductions.[26]Complicated interventions demonstrated that health education intervention was most effective during a systematic review from 9 countries between 1975 and 2000. The length of follow-up ranged from 2 to 60 months. However, there was lots of heterogeneousness between studies in terms of health education.[27]

Supporting research

The study, entitled "Modified relaxation technique for treating high blood pressure (HT) in Thai postmenopausal women (Appendix D)" was summarized as follows.

Clinical proof suggests that the treatment of relaxation ought to be thought-about as a choice for the treatment of HT in postmenopausal women. However, there was no information whether or not relaxation technique would be effective in lowering pressure level in Thai menopausal women with mild high blood pressure. During this study we have a tendency to compare the effectiveness of a modified relaxation (MR) technique with a control group, who received health education alone. The 16-weekrandomized, parallel, open-label, controlled trial occurred within the menopausal clinic at Mahasarakham Hospital. Participants were postmenopausal women, aged 45–65 years, who had delicate HT (SBP, 140–159 mmHg or DBP, 90–99 mmHg). The intervention groups received life-style education combined with a 60-minute session of MR coaching. Subjects were inspired to follow MR at home for 15–20 minutes daily, for a minimum of 5 days per week. The control group received life-style education, together with recommendation on diet and exercise. Mean differences in SBP and DBF from baselines throughout the study periods were calculated, and compared between groups using multilevel mixed-effect modeling for recurrent measures.

There have been 432 participants, 215 within the MR and 217 within the controls, respectively. 100 and 67 participants within the MR group and one hundred seventy five participants within the controls group were completed the study. SBP was significantly reduced within the MR group (mean 2.1 mmHg) than that within the controls. The changes in DBP within the 2 groups were not statistically completely different. Lastly, MR technique is also effective in lowering SBP in Thai postmenopausal women with mild high blood pressure. Its effectiveness is also determined as before long as four weeks when the beginning of treatment. A long-run study, using combined relaxation medical care and antihypertensive drug agents, ought to be investigated during a massive cohort of Thai climacteric women with mild to moderate high blood pressure.

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