



Therapeutic intervention exploring hypertensive patients who respond to health coaching behavior modification therapy

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Comment on original articles, Li et al.'s “The effect of health coaching on blood pressure control and disease self-management among patients in rural areas in China: a randomized trial”.

In the management of hypertension, patient education on diet and exercise by health care providers is one of the useful methods recommended by international guidelines. Li et al. conducted the randomized controlled trial to assess an effect of health coaching on blood pressure (BP) control and disease self-management in 102 patients living in rural areas in China. In this study, the intervention group ($n = 49$) received a total of 6 months of health coaching, which consisted of face-to-face coaching by medical practitioners for the first 1–3 months and telephone coaching for the next 4–5 months. After these interventions, systolic BP (SBP) was reduced by 27.3 ± 16.5 mmHg from baseline in the intervention group and 18.6 ± 16.3 mmHg in the control group (usual care only), which were significant differences between these two groups [1]. Although this study showed the effect of health coaching on the huge reduction of BP level in rural areas, there were several limitations as follows: the data on the use of antihypertensive medication and changes in salt intake were not shown. Li et al. demonstrated the usefulness of health coaching for lowering BP in patients with uncontrolled elevated BP living in rural areas in Asia.

Clinical characteristics of hypertensive patients in Asia are explained as excessive salt intake and high salt sensitivity compared with Caucasians and Black Africans [2]. The first target of health coaching for BP control is

excessive salt intake. Achieving suppression of salt intake by health coaching would have a strong effect on lowering BP. Recent interventional study have reported that low salt diet has the same effect on decrease BP as taking anti-hypertensive thiazide diuretics [3]. Good targets for health care coaching and telemedicine are hypertensive patients with excessive salt intake, diabetic, and obese [4]. These factors such as excessive salt intake, diabetic, and obesity are related to nocturnal hypertension and resistant hypertension [5–7]. Cardiovascular risk is greatly increased in patients with nocturnal hypertension or resistant hypertension, as well as in patients with these overlapping factors such as salt overload, diabetes, and obesity [7–10]. In these patients, diet and exercise therapy can be expected to have a significant BP-lowering effect (Fig. 1). Li et al. have demonstrated the usefulness of health coaching in rural areas [1].

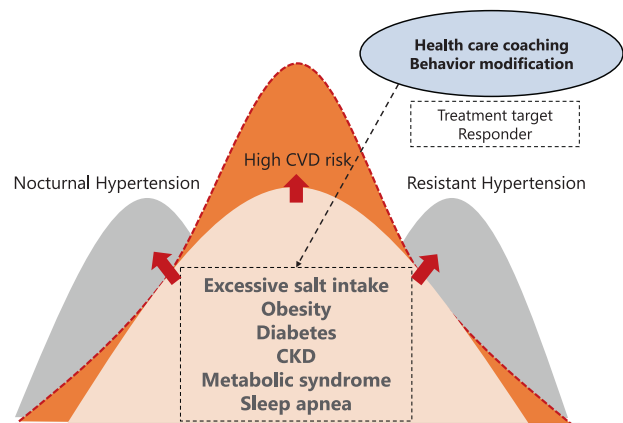


Fig. 1 Hypertensive patients who respond to health coaching behavior modification therapy. Excessive salt intake, obesity and diabetes respond well to behavioral modification. In addition, these factors are associated with nocturnal hypertension and treatment-resistant hypertension. Nocturnal hypertension and treatment-resistant hypertension are cardiovascular disease risks in themselves, but the combination of additional factors, such as obesity and diabetes, further increases the risk of cardiovascular disease

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There are two main methods of health care coaching: the first is the method using dialog and telephone calls by health professionals [11]; the second is applications for hypertension treatment using smart phones and other devices that require less human resources to operate [4, 12, 13]. These two methods of health coaching are complementary to each other. Low health literacy, high salt intake, and low economic level are interrelated factors. Personal health coaching should be used in areas where all these factors are present and where the risk of developing cardiovascular disease is particularly high. Alternatively, traditional health coaching should be used in areas where many hypertensive patients are older and less able to use ICT. On the other hand, behavior change therapy with digital applications is easier to implement for those who are familiar with ICT. In both pharmacological and non-pharmacological treatment of hypertension, it is important to try to identify those who respond well to treatment.

Compliance with ethical standards

Conflict of interest The author declares no competing interests.

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