Integration of First-line Lifestyle Modification and First-line Hypertension Drug Research: Analysis of Source Articles in a Leading Cochrane Report

Dan E. Wilson, Tashina Van Vlack, Jason Shane, Brendin Schievink, Eric Doak
Supervisor: Elizabeth Dean, PhD

Department of Physical Therapy, Faculty of Medicine, University of British Columbia, B.C., Canada

Purpose

- To establish how lifestyle modification, which is considered first-line in hypertension prevention and management, is integrated into anti-hypertension drug trials.

Background

- Persistent hypertension (HTN) is a major risk factor for cardiovascular and cerebrovascular mortality.
- HTN is managed through both medication and lifestyle modification (Table 1).
- The degree to which lifestyle factors for managing HTN are integrated into studies of first-line drug management for hypertension is generally unknown.

Methods

- Analysis of source articles in a leading Cochrane Review that was designed to inform first-line medical treatment of HTN.
- In total 34 source articles in total were reviewed.
- Each article was assessed for any mention of lifestyle intervention including smoking cessation, diet, weight loss, physical activity and exercise, stress reduction, and moderate alcohol consumption.

Results (continued)

- In conclusion: as a supplement smoking cessation may be an appropriate management.
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• Our findings discovered inadequate control and/or mention of lifestyle throughout our source articles included within the 2009 Cochrane Review.
• Current research provides unequivocal data to support the use of lifestyle modification strategies to promote a decrease in blood pressure for individuals with hypertension.
• The inclusion of lifestyle modification strategies in the research designs for hypertension drug trials could enhance current research.
• A shift in research paradigm for clinical drug trials could provide evidence for the invasive/non-invasive practitioner that corresponds to the increasing need for the practical application of research to clinical practice.

Recommendations

1) Encourage lifestyle modification strategies to be incorporated into the research design for pharmacological studies on HTN
2) Generate more evidence to support the effects of lifestyle modification and their interaction with pharmacokinetics of anti HTN drugs
3) Further investigation into current research methods used for RCCT in antihypertension drug studies
4) Future RCCTs examining the effect of medication in the management of hypertension should include:
   - incorporation of lifestyle modification into the study design that is adequately monitored and recorded by investigators
   - stratification of study results with attention to impact of lifestyle modification on outcomes