PEARLS

Practical Evidence About Real Life Situations

New Zealand GUIDELINES GROUP
Te Rōpū Rarangi Tohutohu
Promoting Effective Health and Disability Services

Une valeur élevée d'homocystéine est un facteur de risque cardiovasculaire. Des compléments de vitamine B6 (pyridoxine), B9 (acide folique) ou B12 (cyanocobalamine) font baisser le taux d'homocystéine mais ne réduisent pas les maladies cardiovasculaires. Dommage! Continuons donc de conseiller un mode de vie sain à nos patients. *Bruno Kissling*

No evidence for benefits of homocysteine-lowering interventions for preventing cardiovascular events

PEARLS No. 224, January 2010, written by Brian R McAvoy

Clinical question: How effective are homocysteine-lowering interventions in people with or without preexisting cardiovascular disease?

Bottom line: There is no evidence homocysteine-lowering interventions are of benefit to people at risk of, or with established, cardiovascular disease. Homocysteine-lowering interventions in the form of supplements of vitamins B6 (pyridoxine), B9 (folic acid) or B12 (cyanocobalamin) did not reduce myocardial infarction, stroke or total mortality rates when given alone or in combination, at any dosage, compared with placebo or standard care.

Caveat: Only a few trials clearly described hyperhomocysteinaemia and determined circulating total homocysteine (tHcy) levels during the trial. The impact of losses to follow-up was unclear in many trials and there was variability in interventions across the trials.

Context: Emergent or new risk factors for cardiovascular disease have been recently added to the list of established risk factors (diabetes mellitus, high blood pressure, active smoker, adverse blood lipid profile). One of these risk factors is an elevated tHcy level. Homocysteine is an amino acid, and its levels in blood are influenced by blood levels of the B-complex vitamins B6, B9 and B12. High tHcy levels are associated with an increased risk for atherosclerotic diseases. Hence, it has been suggested B vitamin supplementation might reduce the risk of myocardial infarction, stroke and angina pectoris.

Cochrane Systematic Review: Marti-Carvajal AJ et al. Homocysteine-lowering interventions for preventing cardiovascular events. Cochrane Reviews 2009, Issue 4. Article No. CD006612. DOI: 10.1002/14651858. CD006612.pub2.

This review contains 8 trials involving 24 210 participants.

Le dossier sur les objectifs de baisse de la pression sanguine n'est pas clos. Cette méta-analyse n'est pas (non plus) dépourvue de biais. *Bruno Kissling*

Aiming for blood pressure targets lower than 140/90 mmHg may not be of benefit

PEARLS No. 200, October 2009, written by Brian R McAvoy

Clinical question: Compared to standard blood pressure (BP) targets (140–160/90–100 mmHg), how effective are lower BP targets (135/85 mmHg) in reducing mortality and morbidity?

Bottom line: Lower diastolic targets of 85 mmHg achieved lower blood pressures but were not associated with a reduction in mortality or morbidity (stroke, heart attack, heart failure or kidney failure) when compared with the standard target of 90–100 mmHg. The same conclusion is true if one limits the lower target group to trials with a diastolic target of 80 mmHg. A sensitivity analysis in diabetic patients and in patients with chronic renal disease also did not show a reduction in any of the mortality and morbidity outcomes with lower targets as compared to standard targets.*

* As current guidelines recommend even lower targets for diabetes mellitus and chronic renal disease, the authors of the review are currently conducting systematic reviews in these groups of patients.

Caveat: All of the identified trials assessed diastolic or mean blood pressure targets, and none of the trials compared different targets for systolic blood pressure. Therefore, at present we have no information regarding the benefits or harms of trying to achieve «lower systolic blood pressure targets» as compared with «standard systolic blood pressure targets». The main potential source of bias in this metaanalysis is inevitable because the intervention of trying to achieve a target blood pressure cannot be blinded. Another limitation of this metaanalysis is that one single trial provided most of the participants and outcome data. Selective reporting bias is also a significant source of bias in this metaanalysis, as in some trials certain outcomes were not reported.

Context: When treating elevated BP, doctors need to know what BP target they should try to achieve. The standard of clinical practice for some time has been 140–160/90–100 mmHg. New guidelines are recommending BP targets lower than this standard.

Cochrane Systematic Review: Arguedas JA et al. Treatment blood pressure targets for hypertension. Cochrane Reviews 2009, Issue 3. Article No. CD004349. DOI: 10.1002/14651858.CD004349.pub2.

This review contains 7 studies involving 22 089 participants.

PEARLS

PEARLS are succinct summaries of Cochrane Systematic Reviews for primary care practitioners. They are developed by the Cochrane Primary Care Field and funded by the New Zealand Guidelines Group.

PEARLS provide guidance on whether a treatment is effective or ineffective. PEARLS are prepared as an educational resource and do not replace clinician judgement in the management of individual cases.

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