

Re: Study: calcium supplements raise heart attack risk

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Carotid artery plaque thickness is associated with increased serum calcium levels: The Northern Manhattan study

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Abstract

Background

Elevated serum calcium concentrations are associated with vascular calcification and cardiovascular disease. It is unknown whether there is a relationship between high-normal serum calcium levels and sub-clinical vascular effects. We investigated the association between serum calcium and carotid plaque thickness, a powerful early predictor of clinical coronary and cerebrovascular events.

Methods

Epidemiological study of 1194 subjects from the Northern Manhattan Study cohort, a prospective community-based study designed to investigate risk factors for vascular disease in different race-ethnic groups.

Results

Subjects with carotid plaque had higher corrected serum calcium levels within the normal range than those without carotid plaque (2.21 ± 0.09 mmol/L versus 2.19 ± 0.09 mmol/L, $p < 0.002$). The relationship between carotid plaque and serum calcium persisted after adjustment for traditional cardiovascular risk factors. Subjects in the top quintile of maximal carotid plaque thickness (1.7 mm) were more likely to be in the highest quintile of serum calcium level (OR=1.64, 95% CI=1.17–2.29, $p < 0.004$). The interaction of age and corrected serum calcium was the most significant predictor of carotid plaque thickness when traditional vascular risk factors were considered ($p < 0.001$).

Conclusions

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