

News and review

NEW(S)

Chelation after MI may lower risks, but only among diabetic patients

Use of chelation therapy in patients with prior myocardial infarction (MI) reduces adverse events among patients with diabetes, but not among those without diabetes, according to a study presented at the American Heart Association meeting and published in *Circulation*.^[1]

(RE)VIEWS

Chelation therapy, a program of repeated intravenous administration of ethylene diamine tetraacetic acid (EDTA), often given in combination with vitamins and minerals, has been touted as a safe alternative treatment for atherosclerotic vascular disease.^[2]

The Trial to Assess Chelation Therapy (TACT) was a study (a 10-year, \$31.6-million study involving 1,708 participants at 134 centers) that involved an intervention of EDTA-based infusion regimen in patients aged ≥ 50 years with prior MI. The patients (37% were diabetics) received 40 infusions of EDTA chelation or placebo. It was found that Post-MI patients with diabetes mellitus demonstrated a marked reduction in cardiovascular events (death, re-infarction, stroke, coronary revascularization, or hospitalization for angina) with EDTA chelation. However, the authors conclude that more evidence is needed for routine use of chelation therapy in diabetic post-MI patients.^[3]

It was anticipated long back that calcium chelators could have a significant application to prophylactically reduce the activity of calcium-dependent enzymes, thought to be important in post-ischemic pathology.^[4] Many theories were propagated on the mechanism/s for EDTA towards its potential role in cardiovascular disorders, one being EDTA was thought to block the generation of free radicals implicated both in lipid peroxidation and in the chain of events leading to atherogenesis.

In spite of lack of solid evidence, it has been reported that every year, 110,000 Americans undergo chelation therapy as a complimentary/alternative medicine, costing thousands of dollars per course.^[5] In fact, one systematic review (it may be noted that this review appeared prior to the reference cited as 3) concluded that there is lack of support by the highest

quality of evidence and it is possible that the use of EDTA chelation therapy may result in causing indirect harm to the patient.^[6]

Whatever may the mode by which EDTA is beneficial, it is unclear why that a cohort of post-MI diabetics responded favorably to chelation therapy than those without diabetes mellitus? It is clear that the benefit/s or otherwise of EDTA will be unclear for a long time to come, till then “The argument continues....”

REFERENCES

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