

EDTA and Chelation Therapy: History and Mechanisms of Action

An update:

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ABSTRACT: Twenty-four years have elapsed since my first article on EDTA, co-author with Dr. Robert C. Vance, first appeared. In the past 50 years, it is estimated that over one million patients have received intravenous chelation therapy with one widely used chelator, EDTA. Unfortunately, I believe we may have still failed to discover the primary mechanism(s) of action responsible for the frequently dramatic clinical improvements seen in numerous apparently unrelated conditions treated with EDTA and/or other chelators, unless it is simply that the binding and/or removal of toxic metals permits improved metabolic functioning in a variety of conditions. With science documenting the adverse effects of commonly encountered low levels of heavy metals on health, it is possible that chelation therapy is being vastly underutilized in standard medicine and that combinations of new and existing chelating agents may need to be employed to deal with the broader spectrum of toxic metals now being identified as contributors to many if not most diseases, including aging.

INTRODUCTION:

I am currently a medical consultant to two companies that are involved in food supplement sales and both of these companies sell oral EDTA containing products. Since my initial review of the available literature many more references to EDTA are now available. Unfortunately, today's excessive focus on the potential benefits to patients suffering symptomatic cardiovascular disease has significantly stifled the utilization of EDTA and other chelators in other conditions where I believe it should be routinely utilized, at least as an adjunct to other therapies. These indications include many common and difficult to treat conditions from acute rheumatoid arthritis and psoriasis, to cirrhosis of the liver and cancer, where clinical benefits have been described. I hope to refocus attention to the metal binding activity of chelating agents in general, so that this treatment may soon achieve its proper recognition as an adjunctive therapy in the management of many common health problems.

A BROAD VIEW OF CHELATION IN MEDICAL PRACTICE:

Brain and renal function diseases, macular degeneration, arthritis and arteriosclerosis, are all conditions that have been reported to show benefits from IV EDTA chelation. Over thirty documented mechanisms of action associated with the use of this form of chelation therapy have been published. Newer developments in molecular medicine and cell signaling suggest, however, that there may be other, far more important basic mechanisms waiting to be discovered. One of these might be regulation of transcription factor NF κ B activity, which plays a pivotal role in immune dysregulation. The dramatic responses in some cases of rheumatoid arthritis in the literature may be explained with inhibition of NF κ B by EDTA. This opens up many interesting possibilities for future chelation research in several seemingly unrelated conditions. Recent research in Alzheimer's disease involved the cortical deposition of A β . This has been found to be completely reversible with zinc and copper chelation.

I believe that Chelation therapy for subclinical metal toxicity could soon become far more widely employed by many health care practitioners, many of whom probably will never become trained by either one of the organizations providing advanced training, or become fully certified by the American and/or the International Board of Chelation Therapy.

BYPASS VERSUS NEW IMPROVED COMPREHENSIVE CHELATION THERAPY:

I believe that most patients seldom are adequately informed regarding the severe limitations of all surgical approaches in the managements of their vascular disease. In fact, since the vulnerable plaque involved in 85% of heart attacks and strokes cannot be seen with modern technology, their heart surgery is generally attacking the wrong plaque and thus is providing little, if any, long term benefits at great expense and risk. It is now widely believed that the underlying cause of death in heart attacks and strokes is from a blood clot related to vulnerable soft plaque due to an active infection in the arterial wall, often caused by herpes-related cytomegalic virus or chlamydia pneumonia. Current research calls for treating the blood to prevent these life-threatening clots, not the blood vessel.

I hope that wider dissemination of this new information will help lead to the end of the largely useless surgical attack on coronary vessels so rampant today. In fact, some believe that operating on infected tissue is poor medical practice, which happens frequently with unstable angina as show by elevated C-reactive protein levels that standard medicine has such difficulty managing. In fact, Dr. Terry Haws has informed me that using the cardioCRP test offered by Quest Labs, that the majority of his new patients are coming back reported as "at risk" (verbal communication). It appears that just as "safe" levels of cholesterol and homocysteine tests, over time, were moved lower and lower, the same can be anticipated with c-reactive protein testing as more data regarding "ideal" values is accumulated. The infection that apparently we all have in our vascular tissues causes hypercoagulability, resulting in local ischemia that is far better treated medically. Of course, intravenous chelation always has a place in the management of any ischemic process. We all routinely expect to see improved circulation in 85% or more of our chelation patients and there are over thirty potential beneficial actions of EDTA to help explain this improved blood flow.