Is IV EDTA Still Relevant to ACAM?

The bottom line is a resounding YES. ACAM was originally founded in the 1970s as the American Academy of Medical Preventics by Gary Gordon, DO, MD, Harold Harper, DO, and Ross Gordon, DO, who formed the organization to study, educate, and promote EDTA chelation treatment. Later, as the focus expanded to advanced medical prevention and functional medicine, the name was changed to the American College for Advancement in Medicine (ACAM). Over time, the protocol they promoted was updated, researched across many forms of vascular disease and conditions common to aging, and ultimately studied in two NIH multimillion-dollar randomized controlled trials (RCTs) on vascular disease led by Tony Lamas, MD.

For an interesting history of the development of functional medicine in the US, read the article by Weeks: *Five Eras and 125 Milestones in The Rise of Integrative Health and Medicine* — PMCID: PMC5312742, PMID: 28223905, *Integr Med (Encinitas).* 2017 Feb;16(1):26–28.

When war in the 1930s prevented Germany from acquiring citric acid to chelate calcium in textile dyeing, German chemist Ferdinand Munz developed and patented an alternative calcium binder, Na EDTA (ethylenediaminetetraacetic acid). Simultaneously in the US, Frederick Bersworth patented a different synthesis method that allowed for easier and less expensive production. Martin Rubin, PhD, compiled the world's data on EDTA and helped secure its FDA approval in the 1950s — Calcium EDTA for lead toxicity and Sodium EDTA for hypercalcemia. Physicians treating autoworkers with lead poisoning began noticing marked improvements in cardiovascular conditions such as angina, prompting inquisitive clinicians like Garry Gordon, DO, MD, to study and incorporate EDTA into practice — despite vocal opposition and significant medicolegal challenges. In 1978, Dr. Ray Evers won a precedent-setting case supporting a physician's right to use any FDA-approved drug for conditions beyond its approved indications (off-label prescribing). This ruling opened the door for the broader practice of functional medicine, an area in which ACAM excelled.

➥I remember being blown away by the physicians presenting at my first ACAM meeting in the early 1990s and realizing I had found my cohort. I had no idea at the time that the professional cost — due to the controversial nature of functional medicine and particularly EDTA — would be continuous and stressful for the next 20 years.

In the largest retrospective study on EDTA and vascular disease, over 22,000 patient cases were reviewed, with more than 90% showing improvement in cardiac status. This led to two NIH trials: TACT 1 (2003–2012) and TACT 2 (2016–2022). The first study experienced enrollment delays due to a lawsuit from the so-called "Quackbusters," while the second was interrupted by the COVID-19 pandemic and was conducted during a period when SGLT2 inhibitors and GLP-1 agonists — both of which significantly improve cardiovascular outcomes — were coming into widespread use. TACT 1 showed very positive outcomes, particularly in diabetics and patients with prior anterior MI. TACT 2, which was limited to diabetics with a prior MI, showed no improvement with

EDTA. However, this study did confirm that the ACAM protocol effectively lowers blood lead levels.

So is EDTA still relevant for vascular patients? Yes. The real bottom line in most cardiovascular disease is increasingly linked to lead exposure and accumulation of lead in bone tissue. Blood lead levels are less sensitive markers because lead migrates from the bloodstream to bone within a few months of exposure, where it remains until patients reach their late 40s — at which point it is released at approximately ten times the normal rate, producing health effects even at low doses. The scope of this problem is significant: a landmark population-based cohort study published in *The Lancet Public Health* (Lanphear et al., 2018) estimated that low-level lead exposure accounts for approximately 412,000 deaths annually in the US — more than 18% of all US mortality — with the majority attributable to cardiovascular disease. Given the high blood lead levels and widespread environmental exposure that persisted into the early 1990s, individuals now 36 and older carry significant bone lead burdens that will increasingly affect their health in the years ahead.

It is also well established that other metal exposures — cadmium, arsenic, and mercury — cause oxidative damage, and while we lack RCTs on treatment, clinical experience consistently shows broad health improvements when patients are treated with appropriate chelating agents. Methylation support and glutathione/vitamin C are important adjuncts for mobilizing these ions from different body compartments. It bears emphasizing that not all chelators are equivalent, particularly for mercury and arsenic.

We have solid evidence that calcium and sodium EDTA can be used interchangeably, and that half-dose, 1.5-hour infusions can achieve approximately 75% of the lead removal obtained with the full 3-hour protocol. Join us this June for a virtual update and certification course on EDTA.

~ Dorothy Merritt, MD