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The Road to TACT2

Updates from the Second Trial to Assess Chelation Therapy

In 2013, I wrote, in response to a column by **Chris Cannon, MD,** about the difficulties encountered in changing minds. Chris had written about anticoagulation. I wrote about difficulties encountered convincing my colleagues to look dispassionately at a clinical trial about a pariah therapy, EDTA chelation for coronary disease. I don't want to go over all the strange bumps we encountered on the road to completion of the 134-site, 55,222-infusion study.[1] At the end of this year, however, I am proud of our profession. We TACT investigators discovered that we could always find an objective and curious editor, or editorialist, who would look at the data, look at the investigators, and ask him or herself, "Is this a new paradigm in treating coronary disease?" NIH co-investigators and FDA reviewers also proved themselves solid scientists – willing to ask hard questions, but also willing to listen to the answers, and then act on them. Still others looked at the study objectively because they resented the negative attitude of others in the cardiology establishment.

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I engaged actively in changing minds as well. I joined Twitter and LinkedIn. I post comments that relate to TACT and data interpretation. I am definitely tiresome, but the message gets across to professionals and to lay people. I chased lay press and finally was interviewed by *The Atlantic*.[2] I have given innumerable lectures and grand rounds. When the Kaplan Meier curves appear, there is always a sucking in of breath – you can't beat a 41% reduction in MACE-plus in diabetic post MI patients - and there it is – in Technicolor.[3],[4] At the end, the questions vary, but the answers have all been peer-reviewed and published.

Scan the code to read Dr. Lamas' October 2013 commentary in *CSWN*.

It is what it is, whether we conventional docs like it or not. Ethylene diamine tetraacetic acid (EDTA) chelation therapy, as used in TACT, is safe and effective in reducing coronary events in post MI patients over 50 years old with a creatinine of 2.0 mg/dl or less. In diabetic patients, the results are spectacular. When you look at the table below, remember that the 5-year NNT for secondary prevention of death with statins in diabetes is 19 (10 to 90). In TACT (TABLE), it was 12 in a statin-treated population.[5]

This is an unfinished story, of course. I presented these results to two large pharma companies. The contacts I had were floored by the results. Their bosses pointed out that the components were generic, and how could they make money? They closed the book before reading the foreword. Not too smart.

In contrast, my colleagues and I presented these data to an alphabet soup of federal organizations (NCCAM, NHLBI, NIDDK, and FDA). They don't think about quarterly dividends. They think about how the efficacy of metal chelation infers that an environmental pollutant might be a modifiable risk factor. The consensus was that a replicative trial in the population of patients with the strongest therapeutic signa (patients with diabetes) was the way to get chelation therapy across the finish line.

So here we are, on the threshold of TACT2. My colleagues and I have met with NIH scientists in a pre-application meeting, and we are slowly moving forward. This clinical trial will resemble the original TACT, but we need quick enrollment – I want to be done with the study before I am so old I need its findings. This means we need high-quality enrolling sites.

TABLE. **Summary of TACT Results**

Population	Endpoint	Treatment Comparison	HR	95% CI	P	5-yr NNT
Overall	Primary	EDTA v Placebo	0.82	0.69-0.99	0.035	18
Overall	Primary	EDTA + oral MVM v Placebo + placebo	0.74	0.57-0.95	0.016	12
Diabetes	Primary	EDTA v Placebo	0.59	0.44-0.79	0.0002	6.5
Diabetes	Death	EDTA v Placebo	0.57	0.36-0.88	0.011	12
Diabetes	Primary	EDTA + oral MVM v Placebo + placebo	0.49	0.33-0.75	<0.001	5.5

MVM= multivitamins and multiminerals; NNT= number needed to treat to prevent an event
Primary endpoint = death, MI, stroke, coronary revascularization, hospitalization for angina

And so, if you got this far, you will read my pitch. Those of you who are interested in an exciting, groundbreaking clinical trial, shoot me an email. We can chat and together we will determine whether you are a potential TACT2 site. Whether or not this suits you, TACT is a Black Swan event[6] – stay tuned. ■

Endnotes

1. Lamas GA, Goertz C, Boineau R, et al. *JAMA*. 2013; 309:1241-50.
2. www.theatlantic.com/magazine/archive/2014/10/there-is-no-alternative-medicine/379342/. accessed 18-Oct-2014.
3. Escolar E, Lamas GA, Mark DB, et al. *Circ Cardiovasc Qual Outcomes*. 2014;7:15-24.
4. Lamas GA, Boineau R, Goertz C. *Am Heart J.* 2014; 168:37-44.
5. Costa J, Borges M, David C, Vaz Carneiro A. *BMJ.* 2006;332:1115-24.
6. Taleb, Nassim Nicholas. *The Black Swan: The Impact of the Highly Improbable.* 2007 (2nd ed., 2010), London: Penguin, ISBN 978-0-14103459-1.

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