Risk Reduction and the Program on the Surgical Control of the Hyperlipidemias

To the Editor:

I write on behalf of the 838 patients in the Program on the Surgical Control of the Hyperlipidemias (POSCH) trial; its principal investigators; and the members of the POSCH Data Monitoring Committee, including the late Drs Thomas C. Chalmers and Samuel W. Greenhouse, and Drs J. Ward Kennedy, Gerald R. Cooper, Paul Meier, Curtis L. Meinert, Jeremiah Stamler, and Eugene Strandness; as well as all scientists dedicated to an accurate portrayal of cardiovascular disease history. The strong statements in this letter are my own; I believe others will agree with them.

The exclusion of the POSCH trial from the article entitled “Risk Reduction” by Valentin Fuster, MD, PhD, and Antonio M. Gotto, Jr, MD, DPhil, in the 2000 Anniversary Issue of Circulation was a major and astonishing omission. POSCH, as has been acknowledged by many prominent leaders, is a landmark study. It was a major and astonishing omission. POSCH, a secondary intervention trial that used the partial ileal bypass operation as its intervention modality, bridged the dietary lipid/atherosclerosis intervention trials and the statin drug trials. POSCH was the first affirmative lipid/atherosclerosis trial, with a published patient follow-up at 15 years. It is worth noting that this study was funded solely by the National Heart, Lung, and Blood Institute and received no funding from the pharmaceutical industry. This trial was conducted exclusively in the United States and not overseas.

The lipid modifications in POSCH were equal to or greater than those achieved in the later statin trials. POSCH demonstrated statistically significant reductions in overall mortality, atherosclerotic coronary heart disease mortality, atherosclerotic coronary heart disease mortality combined with recurrent myocardial infarction, the incidence of coronary artery bypass grafting and percutaneous transluminal coronary angioplasty, and peripheral arterial disease. POSCH, an arteriographic as well as a clinical trial, also confirmed arrest and regression of atherosclerotic coronary artery disease on sequential arteriograms with up to 10 years of follow-up.

A historical overview must include all landmark studies, and POSCH, as has been acknowledged by many prominent leaders in this field, is a landmark study.

Henry Buchwald, MD, PhD
Professor of Surgery and Biomedical Engineering
University of Minnesota
Box 290 UMHC
Minneapolis, MN 55455


Response

We agree with Dr Buchwald that the Program on the Surgical Control of the Hyperlipidemias (POSCH) is an important trial in the history of the lipid hypothesis of coronary prevention. Its exclusion from our review in no way detracts from the excellence of that study, but rather emphasizes the difficulty of encapsulating 50 years of risk reduction and forecasting the next 50 years in 5000 words or less. No retrospective can be as complete or as detailed as the authors may wish when space limitations must be considered. Descriptions of other important trials, such as the Coronary Drug Project, were also omitted.

Dr Buchwald highlights many of the major findings of POSCH, which add considerably to the evidence favoring lipid modification to prevent atherosclerotic progression and events. With safety of treatment as a leading concern, many physicians closely examine the adverse events, especially the effects on all deaths, in clinical reports. The significant decreases in total mortality rates observed in-trial in the Scandinavian Simvastatin Survival Study and the Long-Term Intervention with Pravastatin in Ischaemic Disease study, and at 5-year follow-up in POSCH confirm this evidence for the treatment of hyperlipidemia.

Antonio M. Gotto, Jr, MD, DPhil
Weill Medical College of Cornell University
New York, NY

Valentin Fuster, MD, PhD
Mt Sinai Medical Center
New York, NY

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Henry Buchwald

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