



The Society for Cardiac Angiography & Interventions

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Characterizing PCI Outcomes for Our Patients & Ourselves: Best Case, Worst Case, Real Case

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We recently had a Grand Rounds speaker addressing the Department of Medicine on the hot topic, “Drug Eluting Stents.” The speaker had an excellent PowerPoint™ presentation with stellar animations and fantastic color graphics. The structure of the lecture involved about one third of the time devoted to detailing the limitations of coronary stenting today, so that these limitations might be conquered later in the talk by the promise of drug eluting stents.

This introduction to the current status of stent therapy painted stents in the worst possible light, as a counterpoint to the dramatic results of the drug eluting stent trials to date. Worse case results for patients with degenerated saphenous grafts, bifurcation stents, and long chronic total occlusions were presented rather than the median “real world” stent result. This use of valid data to paint a skewed picture is a significant part of the art of presentation today.

Many such examples exist. Another is the frequent reference to dramatically declining mortality from an acute infarction in the thrombolytic era. Trials citing mortality rates in the range of 5% for large populations of patients with acute myocardial infarction are often used to cap a recalling of history that starts with 30% infarc-

tion mortality at the beginning of the intensive care unit era, culminating in the achievements of current thrombolytic therapy. This is despite an overall acute MI mortality of 10-20% among non-selected patients, and even higher mortality rates in some populations [1].

There is a great disservice in these “spun” uses of results from clinical trials. Presenting data in worst case light have led us more broadly down a road we should not travel. Overly optimistic outcome results have the same effect. For example, clinical reports with near perfect results from stenting set a bar that may be too hard to reach in clinical practice.

After the Grand Rounds presentation on drug eluting stents, some of my colleagues in Internal Medicine were asking why they ever send a patient for coronary stenting, when the results have been so abysmal. The data presented were exactly accurate, but in the aggregate

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painted a picture that did not reflect the more real world results of stenting today. The New York State Database and the Society for Coronary Angiography and Interventions' Registry have noted clinical recurrence rates of 15% for real world "all comers" populations in the stent era. This is a more realistic "spin" on our therapy today. Similarly, acute infarction mortality may be in the 5% range for patients treated in thrombolytic trials. Medicare database reports have mortality rates closer to 20% in elderly patients, without any special reference to their eligibility for thrombolytic trials or the availability of emergency infarct angioplasty services [2].

What do we tell our patients about restenosis rates or procedure mortality before they undergo PCI? The cardiovascular surgeon who insists that overall CABG mortality is less than 1% has the same selective attention that we all share in remembering our best cases and forgetting our worst complications. Whether it is the art of storytelling or medical marketing, spinning the data has the same effect on us. When we tell the story enough times we begin to believe it ourselves.

Reports on PCI with no mortality may create unrealistic expectations among our patients, colleagues, trainees, and also in guideline writing committees. In fact, PCI acute mortality remains 1–2% [3].

A clear, balanced, and accurate portrayal of both our successes and our limitations is paramount to developing realistic expectations among our colleagues in Cardiology and also in other disciplines. The standards to which we are held in guideline statements are another example of the critical importance of presenting balanced clinical results, both in our trials and in our database experiential reporting. Most important is what we tell our patients and their families pre-procedure.

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