


REPLY

We thank Dr. Connolly and colleagues for their interest in our editorial comment (1). They provide a snapshot of their experience performing percutaneous coronary intervention (PCI) at a hospital without cardiac surgery backup. Approximately 40% of their cases were elective, 60% were in “unstable” patients, and about 10% were primary PCIs. They report five cases (0.6%) requiring urgent coronary artery bypass surgery (UCABG) and four mortalities (0.5%). These all occurred in the unstable cohort, with no deaths or UCABG in elective patients. It is not stated whether any of the deaths occurred in the five cases that required UCABG, but we know mortality is increased if UCABG is necessary (2). We understand that full disclosure about complications is difficult given the constraints of a Letter to the Editor, but the question could be asked: has their experience led them to change their practice pattern? Because all of their mortalities and UCABG occurred in unstable patients, are unstable patients now being referred to the surgical center just a few miles away?

In addition, if one accepts the report of Lotfi et al. (3), one out of four patients requiring UCABG would be placed at increased risk of harm if delays to surgery were encountered, and about 70% would require stabilization with a balloon pump. Dr. Connolly and colleagues state there was “no delay in surgical transfer,” but the actual, time required for transfer is not provided. Perhaps these same patients would have died or needed UCABG even if they had PCI at the surgical center. Because the risk of a severe complication from PCI is now very low, even centers with on-site cardiac surgery rarely hold a surgical suite in a state of immediate readiness, but rather depend on the fact that an operating room (OR) and surgeon will be available on short notice should a complication arise. Perhaps in their setting this would result in a similar time delay; however, there is still the issue of moving an unstable patient, often with a balloon pump, from the catheterization laboratory to an ambulance, traveling to another hospital, unloading the patient and transporting him or her to the OR. We acknowledge this can be done, but is this truly in the best interest of the patient when a hospital with on-site surgery is just a few miles away?

Perhaps in the future, PCI will be perfected to the point that the need for UCABG will be zero. Unfortunately, even in the best PCI centers in the world, we are not yet at that point. Should that time come, however, it would be appropriate to perform PCI at centers without on-site surgery. Until then, this argument is not about monopolizing care to surgical centers, but performing PCI under the safest possible conditions one can provide for patients.

REFERENCES


REPLY

Drs. Gubner and Rowe express concern about the conclusions and implications of our study (1) and the accompanying editorial comment (2). In regards to transfer delays, data from experienced centers have consistently shown that patients who require urgent coronary artery bypass grafting (UCABG) after failed percutaneous coronary intervention (PCI) have dramatically longer times to surgery in hospitals without versus with on-site surgical availability (359 ± 406 min vs. 170 ± 205 min; p = 0.0001) (3). In this large series, even though the number of patients with three-vessel disease was significantly less in the group without on-site surgery (9% vs. 22%; p < 0.05), the mortality rate was not lower—thus raising concerns that delays to surgery may have been a detrimental factor. Although all of the UCABG patients in our cohort who had at least one of the prespecified criteria were rushed to surgery within 2 h, we did not suggest that this time frame should be mandated as the “standard of excellence.” However, it would be reasonable to suggest that rapid treatment of these unstable UCABG patients is important and more likely to be accomplished at centers with on-site surgical availability. Also, there are other incentives (i.e., financial, access) to establishing new elective angioplasty programs without on-site cardiac surgery, and our study’s main objective was to add information on the potential risk of doing so. We believe it is in the best interest of patients and the cardiology community to have well-delineated strategies to monitor the expansion and performance of such centers in a carefully transparent fashion.

We appreciate the comments of Dr. Connolly and colleagues detailing their experience with angioplasty without surgical backup. The 0.6% UCABG rate is similar to the rate in our report, but with only 338 elective cases in their cohort, it is difficult to make any generalizable statements about the safety of elective angioplasty without surgical backup. In our report, 15 (0.5%) of the 3,039 patients who had elective angioplasty required UCABG. One-third of these elective patients who required UCABG met our prespecified criteria for increased harm attributable to delays of surgery.

Mat Lotfi MD

*Peter H. Seidelin, MD

*Cardiac Intensive Care Unit
University Health Network

*Gregory J. Dehmer, MD, FACC
D. Scott Gantt, DO, FACC

*Division of Cardiology