

Imaging Guided Combined Structural and Coronary Heart Procedures in One Setting, for Awake Patients: Does it Help Save Money and Time in a Resource- Constrained Health System, without Substantial Complications?

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Abstract

The provision/receipt of cutting-edge cardiac care, in a country in financial crisis, is a difficult task for both providers and patients. Many Sri Lankan patients seem to present currently with multiple cardiac problems in a setting of an acute or convalescent myocardial infarction, that requires additional procedures other than culprit coronary artery revascularization by Percutaneous Coronary Intervention (PCI). For financial and skilled human resource implications, treating all these in one setting is desired by patients in middle-income countries like Sri Lanka. The safety and efficacy of severe, non-culprit artery revascularization have been evaluated in clinical trials in the past. However, the safety or feasibility of performing structural heart interventions in the same setting as PCI is based on clinical judgment, aided by cathlab hemodynamic data and imaging modalities, based on high-end digital equipment and software. We illustrate examples where such procedures can be safely undertaken in a single setting, even in a resource- constrained environment, assisted by contemporary digital technologies: complicated atrial septal defect closure with complete right coronary occlusion intervention, and percutaneous mitral commissurotomy with right coronary occlusion intervention, transcatheter aortic valve implantation with left-main coronary intervention are presented as examples of such combined structural and coronary procedures in one setting. Further randomized trials will be required to systematically evaluate these experiences for widespread use.

Keywords: *Simultaneous structural heart and coronary interventions, Atrial septal defects, Percutaneous trans-septal mitral commissurotomy, Percutaneous coronary intervention, transcatheter aortic valve implantation.*