ANGIOGRAPHIC APPROPRIATENESS OF ELECTIVE PERCUTANEOUS CORONARY INTERVENTIONS IN NORTHERN NEW ENGLAND: A BLINDED ANGIOGRAPHIC REVIEW

ACC Moderated Poster Contributions
McCormick Place South, Hall A
Monday, March 26, 2012, 11:00 a.m.-Noon

Session Title: Comparative Effectiveness
Abstract Category: 31. Quality of Care and Outcomes Assessment
Presentation Number: 1251-63

Authors: David Malenka, Alan Wiseman, John Jayne, William Phillips, Mirle Kellett, Mark Lanzieri, Thomas Ryan, Peter Ver Lee, Frank Fedele, Richard Boss, Todd A. MacKenzie, John Robb, Michael Hearne, David Goldberg, Patrick Magnus, Cathy Ross, Matthew Watkins, The Northern New England Cardiovascular Disease Study Group, Dartmouth-Hitchcock Medical Center, Lebanon, NH, USA, Fletcher Allen Health Care, Burlington, VT, USA

Background: Several high profile cases have called into question whether interventionalists are performing percutaneous coronary interventions (PCI) on lesions that are not flow limiting. We hypothesized that in northern New England there is agreement among interventionalists on what vessel segments have flow limiting (≥70%) lesions and are angiographically appropriate for PCI.

Methods: Using 2010 data from our regional registry of consecutive PCIs we identified a random sample of 10 elective PCIs with no prior CABG from each of 6 hospitals. Hospitals provided uncompressed copies of only the diagnostic images from each PCI without patient or hospital identifiers. Each set of images was reviewed by ≥2 interventionalists from 2 outside hospitals. Using a 28 segment map of the coronary tree reviewers were asked to indicate “in which coronary segment(s) there is a flow limiting lesion(s) that in your practice you would consider suitable for PCI” or if uncertain, for FFR. Because the assignment of a lesion to a segment(s) is imprecise, an algorithm was developed that allowed for the coding of adjacent segments to be considered as agreement between reviewers and the index procedure.

Results: Each set of diagnostic images from 60 patients was reviewed at least twice by any of 9 interventionalists. Interventions were performed in a total of 76 segments located in 73 vessels. On a patient level, two reviewers agreed that ≥1 segment was angiographically appropriate for PCI for 59/60 patients and that all segments were appropriate for 56/60 patients. On a vessel level, two reviewers agreed that 68/73 vessels were angiographically appropriate for PCI. On a segment level, two reviewers agree that 70/76 segments were angiographically appropriate for PCI.

Conclusions: Among a group of 6 hospitals in northern New England who agreed to participate in an external review of a random sample of elective PCI cases, there was a high degree of agreement on angiographic appropriateness.