QUALITY OF CARE AND OUTCOMES ASSESSMENT

IMPACT OF DIALYSIS-DEPENDENT END STAGE RENAL DISEASE AND ADVANCED CHRONIC KIDNEY DISEASE ON IN-HOSPITAL OUTCOMES IN PATIENTS UNDERGOING PERCUTANEOUS CORONARY INTERVENTION

ACC Poster Contributions
Georgia World Congress Center, Hall B5
Monday, March 15, 2010, 3:30 p.m.-4:30 p.m.

Session Title: Outcomes, Hypertension and Kidney Disease
Abstract Category: Outcomes Assessment
Presentation Number: 1194-169

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Background: Patients with renal dysfunction are at high risk for developing cardiovascular events. In this study, we sought to describe the clinical and angiographic characteristics, management and in-hospital outcomes of patients with dialysis-dependent end stage renal disease (ESRD) and advanced chronic kidney disease (CKD) undergoing percutaneous coronary intervention (PCI) and to determine if ESRD and advanced CKD were predictive of adverse events.

Methods: The study population included 25,018 patients who underwent PCI between 2004 and 2007 at four New York State hospitals. Clinical and angiographic characteristics and in-hospital outcomes were collected as part of the Long Island Angioplasty Network and the New York State PCI Reporting System (PCIRS).

Results: Patients with ESRD and advanced CKD were older and more often Hispanic. They had lower ejection fractions and higher rates of prior coronary artery revascularization, peripheral vascular disease (PVD), congestive heart failure (CHF), prior stroke and diabetes. In-hospital outcomes are shown in the Table.

	GFR > 60 (n=17,948)	GFR < 60 (n=6,596)	Dialysis-dependent (n=474)	P
Age (yrs)	64±12	72±11	66±12	<0.001
Male (%)	74	56	64	<0.001
Hispanic (%)	6	6	14	<0.001
Prior CABG (%)	18	28	29	<0.001
Diabetes (%)	27	39	58	<0.001
PVD (%)	6	12	25	<0.001
Ejection Fraction (%)	52±11	50±13	47±13	<0.001
CHF (%)	6	20	36	<0.001
Length of Stay (LOS) (days)	2.5+3.3	4.4 + 7.0	8.5 + 17.2	<0.001
Death (%)	0.3	1.3	2.1	<0.001
Stroke (%)	0.1	0.1	0.6	0.004
Re-infarction (%)	0.1	0.1	0.4	0.008
MACCE (%)	0.4	1.5	3.2	<0.001

In multivariate analysis, ESRD and advanced CKD were independent predictors of MACCE (ESRD OR 3.65 95%CI 1.89-7.04; CKD OR 2.21 95%CI 1.55-3.16), in-hospital mortality (ESRD OR 3.68 95%CI 1.62-8.36; CKD OR 2.92 95%CI 1.91-4.46), and LOS (p<0.001).

Conclusions: ESRD and advanced CKD were independently associated with significantly higher rates of MACCE and in-hospital mortality and longer LOS in patients undergoing PCI.