



Pulmonary Hypertension and Venous Thrombo-embolic Disease

CLINICAL BURDEN AND COST ANALYSIS OF PULMONARY HYPERTENSION IN PATIENTS WITH CHRONIC KIDNEY DISEASE: A CROSS SECTIONAL STUDY FROM THE NATIONAL INPATIENT SAMPLE

Poster Contributions
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Background: Presence of pulmonary hypertension (PH) in chronic kidney disease (CKD) is associated with increased mortality. However, the clinical burden and cost impact of PH in CKD patients hospitalized for any cause is yet to be examined.

Methods: All patients >18 years old with a diagnosis of CKD were extracted from the National Inpatient Sample database 2009-10 using ICD-9 code 585. Presence of PH was established with ICD-9 code 416.0. Demographic and traditional risk factors were identified. Primary outcome was in-hospital death and sudden cardiac death. Secondary outcome was length and cost of hospital stay.

Results: Prevalence of CKD was 5.2% (n=2,026,956). PH was prevalent in 0.14% (n=2,840) of patients with CKD. There was increased prevalence of heart failure and atrial fibrillation in patients with PH with CKD but no significant differences in other risk factors (Table 1). In-hospital deaths and sudden cardiac arrests were higher in PH (p<0.001, p=0.03 respectively). PH in CKD independently predicted in-hospital death (OR 1.63 [1.17-2.26]; p=0.03) after adjusting for demographic and risk factors, CAD, heart failure and atrial fibrillation. Patients with PH had longer hospitalization and increased cost of stay (p<0.001).

Conclusion: Presence of PH was associated with increased in-hospital and sudden cardiac deaths in patients with CKD hospitalized for any cause. It also had a significant burden on the cost of stay.

Table 1: Baseline characteristics in patients with pulmonary hypertension and CKD

Variables	CKD Without PHTN N=2,025,783 (99.8%)	CKD With PHTN N=2,840 (0.14%)	P Value
Demographic Factors			
Age	67.6 (67.5-67.7)	67.9 (66.5-69.3)	0.58
Female (%)	47.9	56.2	<0.001
Comorbidities			
Diabetes Mellitus (%)	48.9	46.2	0.22
Hypertension (%)	73	71.9	0.56
Obesity (%)	11.4	12.1	0.64
Heart Failure (%)	22.9	33.5	<0.0001
CAD (%)	41.6	42.5	0.67
Atrial Fibrillation (%)	19.4	32.1	<0.0001
Clinical Outcomes			
Length of stay (days)	6.89 (6.86-6.92)	10.1 (8.8-11.2)	<0.001
In-hospital death (%)	4.6	7.6	<0.001
Sudden cardiac death (%)	1.1	2.0	0.03
Cost of stay (\$)	50,002 (49,758-50,246)	72,650 (62,018-83,282)	<0.001