Secondary Prevention

Primary care physician services and the frequency of comorbidities in patients with acute myocardial infarction

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Background: The management of patients with multiple comorbidities represents a significant burden on healthcare each year. Despite requiring regular medical care to treat chronic conditions, a large number of these patients may not receive proper care. Significant disparities have been identified in patients with multiple comorbidities and those who experience acute coronary syndrome or acute myocardial infarction (AMI). Only limited data exists to identify the impact of comorbidities and utilization of primary care physician (PCP) services on the development of adverse outcomes, such as AMI.

Purpose: The primary objective was to analyze how PCP services utilization can be associated with comorbidities in patients who experienced an AMI.

Methods: This study was based on retrospective data analysis which included 250 patients admitted to the Hartford Hospital Emergency Department (ED) for an AMI. Out of these, 27 patients were excluded due to missing documentation. Collected data included age, gender, medications and recorded comorbidities, such as hypertension, hyperlipidemia, diabetes mellitus (DM), chronic kidney disease (CKD) and previous arrhythmia. Each patient was assessed regarding utilization of PCP services. Statistical analysis was performed in order to identify differences between patients with documented PCP services and those without by using the Chi-square test.

Results: The records allowed for identification of documented PCP services for 172 out of 223 (77.1%) patients. The most common comorbidities were hypertension and hyperlipidemia: in 165 (74.0%) and 157 (70.4%) cases respectively. The most frequent comorbidity was hypertension: 137 out of 172 (79.7%) in pts with PCP vs 28 out of 51 (54.9%) without PCP, and significantly more often in patients with PCP, $p< 0.001$. Hyperlipidemia was the second most frequent comorbidity: in 130 out of 172 (75.6%) vs 27 out of 51 (52.9%) accordingly, and also significantly more often ($p< 0.002$) in patients with PCP services. The number of comorbidities ranged from 0-5, including 32 (14.3%) patients without comorbidities: 16 (9.3%) with a PCP and 16 (31.4%) without PCP services. The majority of patients - 108 (48.5% of 223), had 2-3 documented comorbidities: 89 (51.8%) had two and 19 (34.6%) had three. The remaining 40 (17.9%) patients had 4-5 comorbidities: 37 (21.5%) of them with a PCP and 3 (10.3%) without, with a significant difference ($p < 0.001$) found for patients with a higher number of comorbidities who utilized PCP services.

Conclusions: Our study shows that the majority of patients who presented with an AMI had one or more comorbidities. Furthermore, patients who did not utilize PCP services had fewer identified comorbidities. This suggests that there may be a significant number of patients who experienced AMI with undiagnosed comorbidities due to not having access to PCP services.