Abstract: P1603

Drug utilization patterns and its impact on health resource utilization and outcomes among patients with heart failure at a tertiary care hospital in southern India

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Background

Drugs are the mainstay of heart failure (HF) therapy. Although several guidelines are available in this regard, optimal implementation of guideline-directed medical therapy (GDMT) still remains a challenge.

Purpose

Assessment of drug prescription patterns and its effect on clinical outcomes among patients with heart failure enrolled in Manipal Heart Failure Registry (MHFR).

Methods

MHFR is a prospective, observational cohort of patients with heart failure in a tertiary health centre in southern India. From this registry, we analysed drug utilization patterns over a period of one year from index admission. Clinical outcome was a composite of unscheduled visits, rehospitalization to intensive care unit or emergency wards, and all-cause mortality rate.

Results

A total of 1354 patients with a mean age of 65 ± 13.6 years were enrolled in MHFR from September 2015 to September 2017. Average duration of index hospitalization was 5.3 days and 40.2% were females. Heart failure with reduced ejection fraction (<40%) was seen in 51.1% of patients. Ischemic heart disease was the most common underlying cause (38.9%).

Patients received disease-modifying drugs like beta-blockers (BBs), angiotensin converting enzyme inhibitors (ACEIs) or angiotensin receptor blockers (ARBs) and aldosterone receptor antagonists (ARAs) at rates of 43.6%, 49.3%, and 34.3% respectively. Isosorbide dinitrate/hydralazine, diuretics, and ivabradine were prescribed at rates of 54.3%, 74.2%, and 40.0% respectively. Dual therapy (BB and ACE or ARB) was used in 36.7% and triple therapy (BB, ACE or ARB and ARA) in 31.2%.

Unscheduled visits and re-hospitalization rates were 34.8% and 11.2% respectively. Most of the rehospitalizations were to the emergency room (54%) followed by ICU (85%). All-cause mortality during index
hospitalization and at one-year mortality was 8.8% and 16.5% respectively. The composite clinical outcome occurred in 32.1%.

Patients who received monotherapy (BB or ACEI/ARB or ARA) had a better outcome compared to those who did not (p=0.021). Dual and triple therapy was associated with better outcomes compared to monotherapy (p=0.002).

Conclusion: GDMT improves outcomes in patients with HF but is underutilized in patients with HF. Steps to improve use of GDMT need to address the factors associated with underutilization.