Reducing 30 Day CHF Readmission Rates: Evaluating Medication Efficacy

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Purpose
To review the existing literature to compare the effectiveness of Angiotensin Receptor-Nephrilysin Inhibitors (ARNIs) versus Beta Blockers (BBs) in preventing 30-day hospital readmission rates in patients who are diagnosed with HFrEF ≤ 40%.

Specific Objectives
• Determine readmission rates within 30 days of discharge among patients with HFrEF ≤ 40% who received ARNIs.
• Determine readmission rates within 30 days of discharge among patients with HFrEF ≤ 40% who received BBs.

Background
• Approximately 6.2 million adults are diagnosed with heart failure (HF) in the US.
• Approximately 50% of HF cases have a reduced ejection fraction of 40% or less.
• It is expected that approximately 8.5 million adults in the US will be diagnosed with HF by 2030.
• HF is one of the leading causes of hospitalizations and readmissions in the US.
• HF is expected to increase healthcare costs to $69.7 million in 2030.

Methods
• Eligibility Criteria
  o Articles published in a medical, nursing, or pharmacology journal
  o Considered scientific research
  o Research completed on human participants
• Information sources
  o Systematic search using the UTHSC Online Library
  o Literature search from August 2020-November 2021
  o Databases accessed included Google Scholar, PubMed, and CINAHL
• Methods of results synthesis
  • Compared two general studies
  • Discussed the effectiveness of each class

Results
• Selection and characteristics of sources of evidence
  o Ten articles met the search inclusion criteria.
  o Ten articles completed rapid critical appraisal.
  o Two articles chosen to be synthesized.
• Results of individual sources of evidence
  o BBs reduce 30-day readmission rates.
  o ARNIs vs. controls reduce readmissions and mortality.
  o ARNIs have positive impact on left ventricular remodeling.
• Synthesis of results
  o ARNIs and BBs improve readmission and mortality rates in patients with HFrEF

Implications for Practice
• This scoping review provides insight into the complexity of medication management for HFrEF and its role in reducing hospitalizations.
• Our review indicates a need for further research into the implementation of ARNIs as monotherapy in the treatment of HF compared to BBs.
• ARNIs are typically added in late stages of HF as part of combination therapy.

References
Centers for Medicare & Medicaid Services. (2020, August 6). Hospital Readmission Reduction Program. https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalAcqInd/AcuteReadmissionsReductionProgram

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