Introduction of Home-applied Subcutaneous Furosemide to Treat Heart Failure Exacerbations

Todd McVeigh, PA-C
Duke University Hospital

INTRODUCTION

- Heart failure (HF) is the #1 cause of hospitalization for patients over 65 years old, and mortality increases after each HF hospitalization
- Treatment options for outpatient HF exacerbations have previously consisted of increasing oral diuretics and/or giving intravenous (IV) Lasix
- IV Lasix is the key intervention to try to treat HF exacerbations and prevent HF hospitalization (HFH), however it requires a medical facility for application
- Subcutaneous (SQ) Lasix is a novel strategy that has been shown in trials to have similar efficacy and bioavailability to IV Lasix
- SQ Lasix does not require IV access and has a simpler administration, allowing patients to self-apply while at home. This can potentially lead to easier and faster treatment for outpatient HF exacerbations

METHODS

- Our medical center began preparing for the implementation of SQ Lasix into the ambulatory setting in 2022
- Through a collaborative effort including the pharmaceutical vendor, clinical nurse specialists, ambulatory HF pharmacists, Epic champions, APPs, and a physician champion we were able to design and implement a prescription algorithm and education plan
- This process involved education of RNs, APPs, and physicians as well as the addition of SQ Lasix in Epic to allow for electronic prescription
- We began prescribing SQ Lasix in the ambulatory setting of our academic medical center in the spring of 2023
- We typically prescribe for patients we feel to be experiencing or at imminent risk of HF exacerbation and eventual HFH
- Our goal has been to safely implement the use of SQ Lasix out of our ambulatory HF space and to monitor through data collection whether we can help minimize/prevent HFH and/or ED presentations with the introduction of SQ Lasix

OUTCOMES/RESULTS

- Process Algorithm
  - Patient identified as needing subcutaneous furosemide
  - Electronically prescribe SQ furosemide to specialty pharmacy
  - RN staff teach hands-on patient education for use of infusor
  - Route clinic note and face sheet to specialty pharmacy
  - Provide patient with education on reportable conditions and when to seek care
  - Complete enrollment form
  - Electrolyte monitoring at provider discretion

- Provider
- Nursing

DISCUSSION

- We were able to successfully implement SQ Lasix as an option for our providers to prescribe for our ambulatory HF patients
- Education was successfully provided to multiple levels of team members for to allow for successful launch
- Preliminary data suggests that SQ Lasix application has led to improved symptoms in our HF patients experiencing decompensation
- With the intervention of home-based patient applied SQ Lasix there have been signals of reduced HFH in our first cohort of prescribed patients, trial underway

REFERENCES

- 2022 AHA/ACC/HFSA guideline for the management of heart failure: Circulation. 2022