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2019 ABSTRACT BALLOTS - POSTER ABSTRACTS FOR THE AAHFN SECTION

Identification and Follow up of Prescribed Medications that Potentially Exacerbate Heart Failure: A Quality Improvement Project

Purpose: The purpose of this Quality Improvement Project was to identify the frequency medications are prescribed that may cause exacerbation of HF among patients presenting to the Heart Failure Disease Management Program and to develop a process for identification, increased awareness and improved communication.
Background: The number of patients living with heart failure (HF) continues to rise and many have multiple comorbidities. As a result HF patients frequently have complex drug regimens and multiple healthcare providers. The forgoing factors contribute to the increased risk of medications being prescribed that could lead to a HF exacerbation. Early identification is critical to prevent compromise of the HF patient.
Methods: A 30-day retrospective review of patients presenting to the Heart Failure Disease Management Program who were 65 years of age or older was undertaken. Review of prescribed HF exacerbating medications, magnitude of effect and treatment plan was assessed. A process was then established when more than one exacerbating medication as outline in the AHA Scientific Statement, Drugs that may Cause or Exacerbate HF (2016), was prescribed as potentially having a major effect, a task was sent via the medical records and/or a phone call was placed to the prescribing provider to seek clarity. The medications were identified and potential HF implications were reported with follow up shared with the patient. Data during the process change was collected for 30-days. Descriptive statistics were used to examine data.
Conclusions: Medication regimes are complex yet careful review of non- HF medications and frequency of use is critical to ensuring HF success. Strategies to promote medication review with early identification of potential medications that can exacerbate HF and facilitate communication with prescribing providers are necessary. Since implementation of this intervention we have expanded education among the nursing staff to promote awareness and have included pharmacy and nursing students into the medication review process to identify medications associated with HF exacerbation.
Results: A total of 86 HF patients' records were reviewed with 44 HF patients followed during the process change. Patients were 77 (SD + 7.9) years of age, 57% male, 53.5% HFpEF and 18.6% improved (LVEF of 40-50%). Patients were on a median of 16 medications including PRNs (range 6-47). Prior process change medications associated with a HF exacerbation were prescribed in 64% (27) of the patients with 28.5% (12) having one medication and 35.7% (15) two or more. Of the medications prescribed 9 were identified as having a potential for a major magnitude of effect and 13 major to moderate effect. During the process change 43.2% (19) patient had medications prescribed associated with a HF exacerbation with 36.3% (16) having one medication and 7% (3) two or more. Two medications were identified as having a major magnitude of effect and 11 major to moderate HF effect. The most frequent medications prescribed were Albuterol, Tamsulosin and Verapamil. Three patients were identified with more than 1 medication with the potential for a major effect resulting in contact with the prescribing provider which resulted in re-evaluation and change of the patient's treatment plan.

Improvement in quality of life in patients with hereditary transthyretin amyloidosis with polyneuropathy and cardiomyopathy treated with inotersen in the phase 3 study NEURO-TTR

Introduction: Hereditary transthyretin (TTR) amyloidosis (hATTR) is a rare, progressive, and fatal disease. The disease is caused by misfolded TTR that builds up as amyloid in major organ systems, especially cardiac tissue and nerves, causing cardiomyopathy (CM) and polyneuropathy (PN), respectively. hATTR causes significant morbidity and a progressive decline in patient quality of life (QOL), severely limiting activities of daily living.
Purpose: To evaluate the effect of inotersen, an antisense oligonucleotide inhibitor of TTR protein production, on QOL of patients with hATTR with CM and PN.
Methods: NEURO-TTR (NCT01737398) is a global, randomised, double-blind, placebo-controlled phase 3 study. Adults (n=172) with hATTR-PN (stage 1 or 2) with or without CM were randomly assigned 2:1 and received 300-mg weekly subcutaneous inotersen or placebo for 15 months. CM was defined as diagnosis of hATTR-CM or =1.3 cm interventricular septum thickness (by echocardiography) at baseline. Primary endpoints were change from baseline to week 66 in Norfolk Quality of Life-Diabetic Neuropathy (Norfolk QOL-DN) total score and the modified Neuropathy Impairment Score+7 (mNIS+7). The Optum SF-36v2 Health Survey (SF-36v2) score was an exploratory outcome.
Results: At baseline, 69% of patients were male, mean age was 59 years (range, 27-81 years) and 63% (108/172) had CM. Of patients given placebo and inotersen, 55% (33/60) and 67% (75/112), respectively, had CM. Patients with CM had higher baseline mNIS+7 scores (higher scores indicate worse neuropathy), higher Norfolk QOL-DN total scores (higher scores indicate worse QOL) and lower SF-36v2 physical component summary scores (lower scores indicate worse QOL) than patients without CM. Inotersen-treated patients achieved highly statistically significant benefit compared with placebo in Norfolk QOL-DN total score (P=0.0006) and mNIS+7 (P<0.0001), irrespective of CM status. In patients with CM, inotersen treatment demonstrated significant improvement compared with placebo in Norfolk QOL-DN total score (P=0.036) and the physical component summary score of SF-36v2 (P=0.025). Most adverse events were mild or moderate. Key safety findings of thrombocytopenia and renal events were monitorable and manageable.
Conclusion: Significant improvement in Norfolk QOL-DN and SF-36v2 scores, which include several domains related to patient well-being and activities of daily living, suggest that inotersen improves the QOL of patients with hATTR-PN with CM, the hATTR population with the greatest disease burden.