

**Methods:** Study population will include 203 heart failure patients of which Group A will have 27 systolic heart failure patients with anemia, Group B will have 27 diastolic heart failure patients with anemia and Group C 149 patients with both systolic and diastolic heart failure patients without anemia. All the 54 heart failure patients with anemia will be treated with standard heart failure measures along with correction of anemia and the remaining 149 patients without Anemia will get heart failure measures alone.

**Results:** Maximum number of heart failure patients with glomerular filtration rate (GFR) <60 were seen with New York Heart Association (NYHA) class III (47 (23.1%)). Anemia correction shows evidence of LV remodeling. There is significant difference in six-minute walk test (6MWT) in both groups when compared between screening and final visit.

**Conclusions:** Anemia correction in heart failure patients improves functional class and exercise tolerance. It shows significant role in Left Ventricular (LV) remodeling as well.

**Keywords:** LV remodeling, Anemia, Heart failure

#### PP054

##### **Cardioprotective Effects of *Viscum Album L.* on Isoproterenol-Induced Heart Failure Via Regulation of Nitric Oxide Pathway in Rats**

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**Objective:** *Viscum Album L.* has been shown to have favorable cardiovascular effects. However effects of this medicinal plant on cardiac systolic function are unclear.

**Methods:** A total of 30 male Wistar-Albino rats at 12 weeks of age weighing  $250 \pm 50$  g were randomly divided into three groups: control, ISO (isoproterenol induced heart failure group) and VA (isoproterenol induced heart failure + *Viscum Album L.* treatment group) groups ( $n = 10$  in each group). Echocardiographic assessment, measurement of serum NT-proBNP, NO, iNOS and hs-CRP levels, histopathological analysis and immunofluorescence staining were performed.

**Results:** *Viscum Album L.* provided improvements in all parameters of heart failure including left ventricular diameters, ejection fraction, serum levels of NT-proBNP and histopathological changes. The increased levels of NO and iNOS were observed to attenuate with *Viscum Album L.* treatment. The animals in the VA group also had lower serum levels of hs-CRP when compared to controls and ISO group.

**Conclusions:** Our study results demonstrated that *Viscum Album L.* had favorable effects on left ventricular function in isoproterenol induced heart failure rats. The possible pathophysiological mechanism was up-regulation of NO pathway. The reduction in the serum hs-CRP levels was also noteworthy in terms of promising favorable vascular outcomes.

**Keywords:** Heart failure, *Viscum Album L.*, Isoproterenol

#### PP055

##### **Correlation of Ambulatory Oscillometric Brachial Pulse Wave Velocity with Aortic Velocity Propagation in Patients with Newly Diagnosed Hypertension and Heart Failure with Preserved Ejection Fraction**

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**Objective:** A new 24-hour ambulatory oscillometric BP monitoring device (ABPM, Mobil-O-Graph, IEM) determines brachial arterial pulse contour, from which proprietary programs are used to measure arterial stiffness parameters (augmentation pressure, augmentation index@75[90%CI], reflection magnitude, pulse wave analyses central BP (generalized transfer function), hemodynamic variables, and pulse wave velocity (PWV). Recently, color M-mode-derived propagation velocity of the descending thoracic aorta (aortic velocity propagation [AVP]) was shown to be associated with aortic stiffness. We investigated the strength of the relationship between arterial stiffness parameters of brachial pulse wave velocity analyses and echocardiographic AVP in patients with newly diagnosed hypertension and HFpEF.

**Methods:** A total of 50 consecutive hypertensive patients were underwent assessments of oscillometric pulse wave analyses and echocardiographic AVP.

**Results:** Means among 50 subjects were: age 50 years, weight 95 kg, height 165 cm, heart rate 77 bpm. BP values (mmHg) were: systolic BP 165, diastolic BP 105, mean arterial pressure (MAP) 118 and pulse pressure (PP) 59 mmHg. Mean AVP was  $45 \pm 14$  cm/sec. AVP was strongly related with pulse wave velocity (0.910) and augmentation index (0.852).

**Conclusions:** AVP which is an emerging aortic stiffness parameter, has strong correlation with oscillometric brachial PWV and augmentation index.

**Keywords:** Hypertension, HFpEF, Aortic velocity propagation, pulse wave velocity, augmentation index

#### PP056

##### **Does the Presence of Fragmented QRS Predicts Left Ventricular Systolic and Diastolic Dysfunctions in Metabolic Syndrome Patients?**

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**Objective:** Metabolic syndrome (MetS) is found to be associated with deterioration of the left ventricular (LV) systolic and diastolic functions. One possible factor for this impairment is myocardial fibrosis. Fragmented QRS (fQRS) complexes are associated with myocardial fibrosis. Presence of fQRS on electrocardiogram can detect pronounced impairment of left ventricular systolic and diastolic functions in MetS patients.



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