Semaglutide Reduces Need for Diuretics in Heart Failure Patients

Recent research presented at Heart Failure 2024 highlights that semaglutide reduces the necessity for loop diuretics and their dosage while also positively impacting symptoms, physical limitations, and body weight in patients with heart failure with preserved ejection fraction (HFpEF), irrespective of their diuretic regimen. HFpEF occurs when the heart pumps effectively but struggles to fill properly due to stiffness, often resulting in insufficient oxygenated blood circulation for the body's needs. As populations age and, sedentary lifestyles and obesity rates rise, HFpEF is becoming increasingly prevalent.

The STEP-HFpEF and STEP-HFpEF DM trials evaluated the efficacy of weekly semaglutide treatment versus placebo in patients with obesity-related HFpEF, both with and without diabetes, respectively. Results from these studies consistently demonstrated significant improvements with semaglutide across various metrics, including heart failure symptoms, physical limitations, weight reduction, and six-minute walk distance compared to placebo. A combined analysis of data from these trials investigated whether semaglutide's effects varied based on baseline diuretic use and its impact on changes in diuretic therapy during the trials.

Both trials included patients with obesity-related HFpEF, defined by specific criteria, including elevated left ventricular filling pressures and structural heart abnormalities. Participants were randomised to receive semaglutide or placebo for 52 weeks, with outcomes measured by changes in the Kansas City Cardiomyopathy Questionnaire Clinical Summary Score (KCCQ-CSS) and percentage change in body weight. The study cohort, comprising 1,145 patients from multiple international sites, showed that semaglutide consistently improved KCCQ-CSS across all diuretic subgroups, with a more pronounced effect observed in patients using loop diuretics. Semaglutide also demonstrated a consistent beneficial effect on body weight reduction across all diuretic use categories.

Moreover, semaglutide was associated with a 17% reduction in loop diuretic dosage compared to a slight increase in the placebo group over the study period. This reduction in diuretic dose was accompanied by a lower likelihood of escalating diuretic therapy and a higher likelihood of de-escalating it with semaglutide compared to placebo. Importantly, fewer serious adverse events were reported with semaglutide across all diuretic subgroups, reinforcing its potential as a disease-modifying therapy for HFpEF.

These findings suggest semaglutide's efficacy in improving symptoms, physical function, and facilitating weight loss across varying diuretic use categories in HFpEF patients. The observed reduced loop diuretic dose and better management of diuretic therapy escalation indicate semaglutide's potential long-term clinical benefits in this patient population.

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