

## Making semaglutide accessible in Pakistan: A crucial step for heart failure treatment

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Madam, In 2019, the FDA approved a new Semaglutide pill to help adults with type 2 diabetes control their blood sugar.<sup>1</sup> This medication works because it mimics a natural hormone called glucagon-like peptide-1 (GLP-1).<sup>1,2</sup> Originally, it was considered an add-on treatment for people who already take other medications.<sup>1</sup> But in January 2023, the FDA updated the approval so that Semaglutide can be used as the first medication for some adults with type 2 diabetes, along with healthy lifestyle changes.<sup>1</sup> Recently, a SELECT trial was conducted, which shows its renoprotective function.<sup>3</sup> Beyond these uses, research exposes the potential of semaglutide to dramatically improve heart health, even slashing the risk of death and heart failure.<sup>1,2,4</sup> Although this holds an importance for heart failure patients, the greater importance of it comes from the fact that it has shown beneficial results in heart failure with preserved ejection fraction patients too, which is a type of heart failure that's predominant among diabetic and obese individuals.<sup>4</sup> This makes it a drug of interest in cardiology as we have only a limited number of drugs to treat the hopeful population. This letter examines the expanded role of Semaglutide, encompassing its existing uses and emerging application in hfpEF treatment.

A new study by Michael et al.<sup>2</sup>, published in The New England Journal of Medicine in April 2024, investigated the use of Semaglutide for obese patients with heart failure with preserved ejection fraction (HfpEF) and type 2 diabetes (DM2). This double-blind, randomized, multinational trial enrolled 616 participants from 16 countries and compared Semaglutide treatment (STEP-HfpEF DM trial) to a placebo control group. The study included adults aged 18 and over with a body mass index (BMI) of 30 or greater who had been diagnosed with both HfpEF and DM2. Half the participants received once-

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weekly Semaglutide injections for a year, while the others received a placebo.

Compared to the placebo group, those taking Semaglutide for the next 52 weeks showed significant improvements in heart failure symptoms and physical limitations (13.7 point increase vs. 6.4 point increase). Additionally, the Semaglutide group experienced a substantial weight loss (9.8% reduction) and a greater improvement in their six-minute walk test distance (12.7 meters on average).<sup>2</sup> However, 17.7% of participants reported side effects such as gastrointestinal disorders and infections. However, the overall findings suggest this drug may significantly improve heart failure symptoms, physical function, and weight loss in obese patients with HfpEF and DM2, with acceptable side effects.<sup>2,5</sup>

This once-promising anti-obesity drug is turning heads for both its effectiveness and alarming black market trend. Semaglutide's versatility in treating various conditions like heart failure and chronic kidney disease makes it a valuable tool but, unfortunately, a scarce one, especially in a developing country like Pakistan. Regulatory bodies need to step in and ensure this miracle drug reaches those who truly need it. Workshops and webinars are essential tools for keeping clinicians up-to-date in this regard.

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