

Efficiency and safety of adding semaglutide for the management of patients with type 2 diabetes and heart failure in real-world clinical practice

 **Martina God***,
 **Marin Vidak**,
 **Ivana Jurin**,
 **Šime Manola**

University Hospital Dubrava,
Zagreb, Croatia

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***ADDRESS FOR CORRESPONDENCE:** Martina God, Klinička bolnica Dubrava, Av. G. Šuška 6, HR-10000 Zagreb, Croatia. / Phone: +385-99-5018-336 / E-mail: martina.god@gmail.com

ORCID: Martina God, <https://orcid.org/0009-0009-8838-0549> • Marin Vidak, <https://orcid.org/0000-0003-0341-9598>
Ivana Jurin, <https://orcid.org/0000-0002-2637-9691> • Šime Manola, <https://orcid.org/0000-0001-6444-2674>

Introduction: The coexistence of heart failure (HF) with type 2 diabetes (T2D) is common and T2D is considered one of the risk factors for adverse outcomes in HF patients¹⁻³. Studies found conflicting results in terms of HF outcomes with some studies showing lower rates of HF hospitalization among glucagon-like peptide-1 (GLP1) receptor agonists users and others showing neutral effects on HF hospitalizations. We aimed to evaluate whether adding semaglutide to sodium-glucose cotransporter-2 (SGLT2) inhibitors benefits HF patients with T2D.

Patients and Methods: This was a prospective observational study conducted at University Hospital Dubrava, Zagreb. We recruited patients presented with HF symptoms from May 2021 to August 2023. We collected data on gender, age, prescribed medications, body mass index, comorbidities, NT-proBNP, lipid and HbA1c levels, ejection fraction and number of hospitalizations. Categorical variables are presented as frequencies and percentages and continuous variables are presented as median and interquartile range (IQR). P values <0.05 were considered as statistically significant. Statistical analysis was performed using JASP software.

Results: We collected data of 850 participants in total. 121 (14.2%) participants already had DM2 at the time of the study initiation, 42 (5%) were diagnosed with DM2 during the checkup and 145 participants had prediabetes (17%). Semaglutide was started in 72 participants. There was a reduction in BMI in both groups with more significant decrease in semaglutide group (0.3 in the non-semaglutide group and 2.2 in the semaglutide group, P < 0.0001). NT-proBNP levels were lower in the semaglutide group (881 vs 1945.4pg/mL, P<0.001) and HbA1c was reduced by 1.11 points (95% CI 0.55-1.69) in the semaglutide group and 0.35 (95% CI 0.26-0.44) in the non-semaglutide group. There was no change in the cholesterol, LDL levels or HF hospitalizations.

Conclusion: Semaglutide offers significant metabolic advantages in patients with HF and TD2 by reducing glucose levels and body weight. Use of semaglutide should be facilitated in patients with TD2 as it decreases NT-proBNP and HbA1c levels. While yielding no difference in hospitalizations, adding semaglutide provides better control of cardiovascular risk factors. Future studies are needed to assess long term impact of semaglutide in HF and T2D patients.

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LITERATURE

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