STUDENTS' CORNER
LETTER TO THE EDITOR

Semaglutide-A ray of hope for CKD in diabetic patients

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Dear Editor, Diabetes imposes a significant burden on global healthcare systems. According to the IDF Diabetes Atlas (2021), 10.5% of adults (aged 20-79) have diabetes, and by 2045, projections indicate that approximately 783 million adults, or 1 in 8, will be living with diabetes—a 46% increase.[1] Among the numerous complications of diabetes, chronic kidney disease (CKD) is particularly noteworthy. Type 2 diabetes is the leading cause of CKD[2] in many countries, with up to 40% of diabetics developing this condition.[1] Between 1990 and 2017, new CKD cases in type 2 diabetics increased by 74%. In 2019, diabetes and related kidney diseases accounted for around 2 million deaths.[3]

Despite various treatment options, kidney function in diabetic patients often deteriorates, leading to kidney failure and death, primarily due to cardiovascular issues. While researchers are exploring potential alternatives, the antidiabetic drug Semaglutide shows promise. Semaglutide, a GLP-1 agonist, increases insulin release, lowers glucagon release, delays gastric emptying, and reduces appetite. A recent clinical trial published in NEJM found that Semaglutide significantly reduced the risk of critical kidney outcomes and cardiovascular death in type 2 diabetes patients with CKD.[2] Additionally, Semaglutide aids in weight reduction. Another NEJM RCT reported that Semaglutide led to significant reductions in heart failure symptoms and greater weight loss in patients with obesity-related heart failure and type 2 diabetes compared to a placebo over one year.[4] Post hoc analyses from the SUSTAIN 6 and PIONEER 6 trials showed consistent effects on major adverse cardiovascular events (MACE) across varying cardiovascular risk levels.[5]

Regarding CKD diabetic patients' response to Semaglutide, an observational study involving 296 T2D patients with CKD and 196 without CKD showed minimal differences in treatment response between the groups.[6] The promising introduction of Semaglutide could revolutionize future clinical care, potentially reducing the prevalence of diabetes complications. To prevent long-term complications and improve the quality of life for those with CKD and diabetes, larger clinical trials and more effective medications are needed.

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