Latest news: Tirzepatide for type 2 diabetes; cardio-diabetes clinics; and cardiorenal biomarkers in DKD

Stay abreast of the latest news that could impact diabetes nursing.

NICE recommends tirzepatide for type 2 diabetes

An estimated 180 000 people could benefit from a decision by NICE to recommend a new treatment option for adults with difficult-to-manage type 2 diabetes, alongside diet and exercise.

Tirzepatide, also known as Mounjaro, is a dual receptor agonist that acts on both glucose-dependent insulinotropic polypeptide (GIP) receptors and glucagon-like peptide-1 (GLP-1) receptors. It is administered as a once-weekly injection.

Clinical trials indicate that tirzepatide use results in significant reductions in blood glucose levels and body weight compared with semaglutide, insulin therapy or placebo. Trial evidence included 81% to 97% of participants achieving better glycaemic control, and 54% to 88% reaching a 5% or greater reduction in body weight.

Under the recommendations, previous triple therapy with metformin and two other antidiabetes drugs must have been ineffective, not tolerated or contraindicated. Tirzepatide is only recommended in people with a BMI ≥35 kg/m^2 and specific psychological or other medical problems associated with obesity; or who have a BMI <35 kg/m^2 but for whom insulin therapy would have significant occupational implications or weight loss would benefit other significant obesity-related complications.

This comes after the manufacturer provided additional analyses and modelling to the NICE committee on the drug's clinical and cost-effectiveness. Previous draft guidance had rejected the use of tirzepatide as an alternative to other antidiabetes drugs.

While news of this potential new treatment option for people with type 2 diabetes has been welcomed, many will hope that tirzepatide will not be hit by the same problems that currently afflict supplies of GLP-1 RA medication.

NICE published its final guidance on 25 October 2023, and it is hoped that the product will be made available in the NHS within 90 days.

The final NICE recommendations can be read here.

Cardio-diabetes clinic improving outcomes following heart attack

An innovative cardio-diabetes outpatient service is helping to reduce recurring heart attacks in people with diabetes. The "one-stop shop" approach provides joined-up care in the acute setting before handing over care to GP services.

Cardiovascular-related complications are common in people living with diabetes. Restoring and extending the benefits of secondary prevention measures in cardiovascular disease is a key priority for NHS England.

The new cardio-diabetes in-reach and outpatient programme was created under a collaboration between United Lincolnshire Hospitals NHS Trust (ULHT) and Boehringer Ingelheim. The clinical teams at the Lincolnshire Heart Centre and the Diabetes Unit at ULHT developed and established a streamlined service to improve and optimise the management and care of patients with diabetes who are admitted with heart attack or acute coronary syndrome.

Previously, some people had been treated for the conditions separately, which resulted in repeated reviews and missed opportunities for optimised care. Under the new arrangements, patients with diabetes on the Trust's cardiology wards receive input from both diabetes and cardiac specialist teams. This cross-disciplinary expertise provides the opportunity to optimise medical care for each condition with the latest recommended therapies, and to improve outcomes.

By making it easier for individuals to manage their conditions following discharge (and assisting them to understand how they are linked), the joined-up approach helps to prevent future emergencies, such as heart attack, heart failure or cardiac arrest.

The optimisation of care in the acute setting may also alleviate pressure on primary care services by reducing the subsequent need for GP appointments.

Cardiorenal biomarkers, canagliflozin and outcomes in DKD

A two-way link between cardiovascular disease and chronic kidney disease (CKD) exists, such that each diagnosis may increase the risk for incidence of the other or, if already established, may exacerbate the other. People with type 2 diabetes and CKD with albuminuria are, consequently, at very high risk for cardiac and renal events. Evidence has emerged that

concentrations of several circulating stress biomarkers may predict the onset and progression of CKD in type 2 diabetes, and prognosticate cardiovascular events.

The present study evaluated the effect of canagliflozin on biomarker concentrations, and the potential of each biomarker to predict cardiovascular and kidney outcomes. Data from 2627 participants with diabetic kidney disease treated with canagliflozin 100 mg or placebo in the CREDENCE trial were included in a *post hoc* analysis.

At baseline, the median (quartiles 1 and 3) concentration of each biomarker (NT-proBNP, high-sensitivity cardiac troponin T, growth differentiation factor-15 and IGFBP7) was generally elevated compared with healthy individuals, and was often comparable to those reported for those with heart failure (HF).

At 1 year, all biomarker concentrations rose by 6% to 29% in the placebo arm, compared with 3% to 10% in the canagliflozin arm. Treatment with canagliflozin modestly reduced the longitudinal trajectory of rise in each biomarker. The 3-year reduction in NT-proBNP was particularly noteworthy, with abnormal concentrations (≥125 ng/L) being recorded for 67.1% of participants receiving canagliflozin compared with 75.7% for placebo (P=0.009).

Baseline concentrations of each biomarker were strongly predictive of cardiac and renal outcomes, including HF and progression of CKD. Among participants with baseline data for all four biomarkers, those with high risk scores (HR, 4.01) and moderate risk scores (HR, 2.39) showed a greater risk for the primary outcome (a composite of end-stage kidney disease, doubling of creatinine level, or renal or cardiovascular death) compared with those with low risk scores.

Moreover, by 1 year, 50% increases in NT-proBNP (HR, 1.11), high-sensitivity cardiac troponin T (HR, 1.86), growth differentiation factor-15 (HR, 1.45) and IGFBP7 (HR, 3.76) were associated with risk of the primary outcome.

The findings strengthen our understanding of the substantial cardiovascular risk in those with type 2 diabetes, the value of biomarkers for prognosticating major complications in these individuals, and the consistent benefit of SGLT2 inhibition in reducing event rates.

The full article can be read here. ■

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