

## Game Changers

### **SGLT2 INHIBITORS – SOMETHING IN THE WATER, OR THE HEART OF THE MATTER?**

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Sodium-glucose co-transporter 2 inhibitors (SGLT2i) are an established therapy in the treatment of type 2 diabetes mellitus. Meta-analysis has recently shown them to have favourable outcomes in renal and cardiovascular disease.<sup>1</sup>

Significant benefits have been shown in mortality, major adverse cardiovascular events, heart failure, and renal outcomes such as progression of kidney disease and albuminuria. For adverse events, rates of discontinuation are <5%, with diabetic ketoacidosis being the most serious raised risk, albeit with low event rates (<1 per 1000 patient-years). Previously reported increased risks of urinary tract infections, amputation and fractures have not been confirmed in meta-analysis.

This has resulted in guidelines recommending SGLT2i as first line therapy for patients with diabetes and atherosclerotic cardiovascular disease or high/very-high cardiovascular risk factors.<sup>2</sup>

SGLT2i mechanism of action is partly understood, with evident glycosuria and natriuresis, but there is still work to be done in this field. Other proposed mechanisms include vasodilatation, reduced intra-glomerular pressure and increased glucagon levels. The finding that dapagliflozin improved heart failure outcomes in patients without diabetes is fascinating.<sup>3</sup> Additional mechanisms of action are being investigated, as are the effects on other conditions like heart failure with preserved ejection fraction (NCT03619213), and the results are eagerly awaited.

#### **REFERENCES:**

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