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Medical Media Fact Sheet

Dapagliflozin

What is dapagliflozin?	Dapagliflozin is a first-in-class treatment developed by Bristol-Myers Squibb and AstraZeneca as a once-daily oral therapy for the treatment of adult patients with Type 2 Diabetes.
Drug Class	Sodium glucose co-transporter-2 (SGLT2) inhibitor.
SGLT2 Inhibition	The kidney plays an important role in glucose balance, normally filtering ~180g of glucose each day, with virtually all glucose being reabsorbed back into circulation. ¹ SGLT2 is a major sodium-glucose co-transporter in the kidney and is an insulin-independent pathway for the reabsorption of glucose back into the blood. ² SGLT2 inhibition with dapagliflozin reduces glucose reabsorption, leading to the direct excretion of excess glucose via the urine and thereby lowering blood glucose levels. ³
Why SGLT2?	In 1835, French chemists isolated a substance, phlorizin, from the bark of apple trees, which when taken in high doses was discovered to cause excretion of glucose in the urine. ⁴ Investigation into phlorizin in the late 1980s to early 1990s led to the identification of SGLTs and guided researchers to a potential new way for reducing high blood glucose. ⁴ Bristol-Myers Squibb and AstraZeneca have pursued the research in SGLT2 inhibitors leading to the development of dapagliflozin.
Dapagliflozin's Clinical Profile	<p>Clinical studies with dapagliflozin have shown sustained HbA1c reduction as well as additional benefits such as reductions in body weight^{3,5,6,7,8,9} and blood pressure^{3,7,8,9} in patients with Type 2 Diabetes compared to placebo.</p> <p>Urinary tract infections (UTI) and genital infections are a relatively common occurrence in patients with Type 2 diabetes, as a higher glucose concentration in the urine may enhance the growth of bacterial and fungal organisms. Genital infections were reported in 4.8% of patients who received dapagliflozin 10 mg compared to 0.9% on placebo, and UTIs in 4.3% compared to 3.7% respectively in a pooled analysis up to 24 weeks. Of those treated, most infections were mild to moderate and patients responded to an initial course of standard treatment and rarely resulted in discontinuation from dapagliflozin treatment. These infections were more frequent in females and patients with a prior history of recurrent infection.¹⁰</p>
Indication	<p>The European Commission (EC) approved dapagliflozin on 12 November in the 27 countries of the European Union (EU) for the treatment of Type 2 Diabetes mellitus in adults aged 18 years and older to improve glycaemic control:¹⁰</p> <ul style="list-style-type: none"> • As a monotherapy, when diet and exercise alone do not provide adequate glycaemic

	<p>control in patients for whom use of metformin is considered inappropriate due to intolerance¹⁰</p> <ul style="list-style-type: none">• In combination with other glucose-lowering medicinal products including insulin, when these, together with diet and exercise, do not provide adequate glycaemic control¹⁰
About the Collaboration	<p>Bristol-Myers Squibb and AstraZeneca entered into a collaboration in January 2007 to enable the companies to research, develop and commercialise select investigational drugs for Type 2 Diabetes. The Bristol-Myers Squibb/AstraZeneca Diabetes collaboration is dedicated to global patient care, improving patient outcomes and creating a new vision for the treatment of Type 2 Diabetes.</p>

References

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