Trijardy™ XR (empagliflozin/linagliptin/metformin) – New drug approval

- On January 27, 2020, Boehringer Ingelheim and Eli Lilly announced the FDA approval of Trijardy XR (empagliflozin/linagliptin/metformin), an adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus. The empagliflozin component is also indicated to reduce the risk of cardiovascular death in adults with type 2 diabetes mellitus and established cardiovascular disease.

    - Trijardy XR is not recommended for patients with type 1 diabetes or for the treatment of diabetic ketoacidosis.
    - Trijardy XR has not been studied in patients with a history of pancreatitis. It is unknown whether patients with a history of pancreatitis are at an increased risk for the development of pancreatitis while using Trijardy XR.

- Trijardy XR provides three type 2 diabetes medicines in one pill, including Jardiance® (empagliflozin), Tradjenta® (linagliptin) and metformin hydrochloride extended-release.

- The FDA approval of Trijardy XR is based on two randomized open-label trials that assessed the bioequivalence of empagliflozin, linagliptin and metformin hydrochloride extended-release fixed-dose combination tablets and their individual components in healthy adults. The safety profile of Trijardy XR was found to be consistent with its individual components.

- Trijardy XR carries a boxed warning for lactic acidosis.

- Trijardy XR is contraindicated in patients with:

    - Severe renal impairment (eGFR less than 30 mL/min/1.73 m^2), end-stage renal disease, or dialysis
    - Acute or chronic metabolic acidosis, including diabetic ketoacidosis
    - Hypersensitivity to empagliflozin, linagliptin, metformin or any of the excipients in Trijardy XR.

- Additional warnings and precautions for Trijardy XR include pancreatitis, heart failure, hypotension, ketoacidosis, acute kidney injury, urosepsis and pyelonephritis, hypoglycemia with concomitant use with insulin and insulin secretagogues, necrotizing fasciitis of the perineum (Fournier's gangrene), genital mycotic infections, hypersensitivity reactions, vitamin B_{12} deficiency, severe and disabling arthralgia, and bullous pemphigoid.

- The most common adverse reactions (≥ 5%) with Trijardy XR use were upper respiratory tract infection, urinary tract infection, nasopharyngitis, diarrhea, constipation, headache, and gastroenteritis.

- Trijardy should be taken orally once daily with a meal in the morning. The recommended initial dose of Trijardy XR is based on the patient's current regimen:

    - In patients on metformin, with or without linagliptin, switch to Trijardy XR containing a similar total daily dose of metformin and a total daily dose of empagliflozin 10 mg and linagliptin 5 mg;

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    - In patients on metformin and any regimen containing empagliflozin, with or without linagliptin, switch to Trijardy XR containing a similar total daily dose of metformin, the same total daily dose of empagliflozin and linagliptin 5 mg.

- The dose may be adjusted as appropriate, not to exceed the maximum recommended daily dose of empagliflozin 25 mg, linagliptin 5 mg and metformin 2000 mg.

- Boehringer Ingelheim launch plans for Trijardy XR are pending. Trijardy XR will be available as fixed-dose tablets containing:

    - 5 mg empagliflozin/2.5 mg linagliptin/1000 mg metformin extended-release
    - 10 mg empagliflozin/5 mg linagliptin/1000 mg metformin extended-release
    - 12.5 mg empagliflozin/2.5 mg linagliptin/1000 mg metformin extended-release
    - 25 mg empagliflozin/5 mg linagliptin/1000 mg metformin HCl extended-release