Elfabrio® (pegunigalsidase alfa-iwxj) – New drug approval

- On May 10, 2023, Chiesi Global Rare Diseases and Protalix BioTherapeutics announced the FDA approval of Elfabrio (pegunigalsidase alfa-iwxj), for the treatment of adults with confirmed Fabry disease.

- Fabry disease is an X–linked inherited disease that results from deficient activity of the lysosomal α-Galactosidase-A enzyme resulting in progressive accumulation of abnormal deposits of a fatty substance called globotriaosylceramide (Gb3) in the lysosomes throughout a person's body. The accumulation of Gb3 results in episodes of pain and impaired peripheral sensation to end-organ failure.

    — Fabry disease occurs in one person per 40,000 to 60,000.

- Elfabrio is an enzyme replacement therapy (ERT) – it is a chemically modified stabilized recombinant version of the α-Galactosidase-A enzyme.

- The efficacy of Elfabrio was established in an open-label dose-ranging study in adults diagnosed with Fabry disease. Patients received Elfabrio at 0.2 mg/kg, 1 mg/kg, or 2 mg/kg given intravenously every other week for 52 weeks. The 0.2 mg/kg and 2 mg/kg dosage regimens are not approved and are not recommended. The average number of Gb3 inclusions per renal peritubular capillary in renal biopsy specimens of patients was assessed by light microscopy using the quantitative Barisoni Lipid Inclusion Scoring System (BLISS). Evaluable renal biopsies were obtained at baseline and at 26 weeks of treatment in 14 of the 16 patients.

    — The mean change from baseline to 26 weeks in the BLISS score was -3.1 (95% CI: -4.8, -1.4)

- Additionally, Elfabrio was evaluated in a randomized, double-blind, and active-controlled study in 77 ERT-experienced adults diagnosed with Fabry disease. Patients were randomized to receive Elfabrio or Fabrazyme® (agalsidase beta), another ERT, every 2 weeks for 104 weeks. The primary endpoint was the annualized rate of change in estimated glomerular filtration rate (eGFR slope) assessed over 104 weeks.

    — The estimated mean eGFR slope was -2.4 and -2.3 mL/min/1.73 m^2/year on Elfabrio and Fabrazyme respectively. The estimated treatment difference was -0.1 (95% CI: -2.3, 2.1) mL/min/1.73 m^2/year.

- Elfabrio carries a boxed warning for hypersensitivity reactions including anaphylaxis.

- Additional warnings and precautions for Elfabrio include infusion-associated reactions and membranoproliferative glomerulonephritis.

- The most common adverse reactions (≥ 15%) with Elfabrio use were infusion-associated reactions, nasopharyngitis, headache, diarrhea, fatigue, nausea, back pain, pain in extremity, and sinusitis.

- The recommended dose of Elfabrio, based on actual body weight, is 1 mg/kg administered by intravenous infusion every 2 weeks.

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- Chiesi's launch plans for Elfabrio are pending. Elfabrio will be available as a 20 mg/10 mL single-dose vial.