

New Drugs and Therapeutics Update

Evinacumab-dgnb (EVKEEZA®)

Evinacumab-dgnb (EVKEEZA®) is a monoclonal antibody that binds ANGPTL-3, a member of the angioproteinlike-3 protein family expressed primarily in the liver (1). Evinacumab blocks angioprotein-3 activity on hepatic lipoprotein lipase and endothelial lipase, which increases VLDL processing and clearance upstream of LDL formation. This allows lowering of LDL-C, HDL-C and triglycerides independent of the presence of LDL-receptor (1). Evinacumab was initially approved by the Food and Drug Administration (FDA) in February 2021 as an add-on treatment of children and adults 12 years of age and older with homozygous familial hypercholesterolemia (2). On March 22, 2023, the FDA extended the approval to children 5 – 11 years of age (3).

The approval was based on results of a single-arm, open-label phase 3 trial in 14 children ages 5-11 years with homozygous familial hypercholesterolemia who were already on other treatments for lowering LDL including plasmapheresis and had a mean LDL cholesterol of 264 mg/dl at study entry. The results showed a mean decrease in LDL-cholesterol of 48% (95% confidence interval: -69% to -28%) after 24 weeks of treatment (4). The observed change in LDL-C in children 5-11 years was similar to that noted previously in children and adults older than 12 years (2).

The recommended dosage of EVKEEZA is 15 mg/kg administered by intravenous infusion usually over an hour every 4 weeks. The medication can be used as an adjunct to other drugs in patients 5 years and older with homozygous familial hypercholesterolemia. The lipid lowering effect may be noted as early as 2 weeks after starting the medication (4). While treatment for at least one year has been deemed safe, studies are ongoing to determine long-term safety.

The most common adverse effects are dizziness, flu-like symptoms, nausea and pain in extremities. Patients should be asked for hypersensitivity to other components of the injection, such as arginine hydrochloride, histidine hydrochloride monohydrate, proline and polysorbate 80 and advised that hypersensitivity has occurred to EVKEEZA in other patients. Patients should be advised about potential risk to the fetus and to use contraception while on medication and until 5 months from last injection (3).

References:

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