

Review Article**A Brief Introduction to Bempedoic Acid**

C. Reshma*, S. Aravind*, S. shahina¹.

1. Shanthi ram collage of pharmacy, Nandyal, Andhra Pradesh,India.

Corresponding Author: C.Reshma*, S. Aravind, Shanthi ram collage of pharmacy, Nandyal, Andhra Pradesh, India.

Received Date: August 14, 2020

Publication Date: September 01, 2020

Introduction

Brand Name: Nexletol, Nilemdo

Generic Name: Bempedoic acid

Company Name: ESPERION

Formulations: Tablet

Dosage: 180 mg PO 4times daily

Year of Approval: February 2020 in USA, April2020 in European union.

Drug Properties

Protein Binding - 99.3%

Metabolism - Glucuronidation

Elimination Half Life - 21 ± 1 hrs

Excretion - 70% urine, 30% feces

Mechanism of Action

Bempedoic acid is a drug which activated to the thioester with co-enzyme A by the enzyme SLC27A (very-long-chain acetyl CoA synthetase) in the liver. This activated substance inhibits ATP citrate lyase which is involved in the liver's biosynthesis of cholesterol upstream of HMG-CoA reductase the enzyme that is blocked by the statins.

AMP

Activated protein kinase is also activated by these substances, but this effect is not likely relevant in humans.

Side Effects

- Muscle spasm
- Lower back pain
- gastrointestinal problems such as diarrhea.

Therapeutic Uses

Bempedoic acid in combination with highest tolerated statin therapy which is used to treat hypercholesterolemia for adults with atherosclerotic cardiovascular diseases, heterozygous familial hypercholesterolemia in the united states. And given to patients who need additional lowering of LDL cholesterol.

Bempedoic acid is used to treat primary hypercholesterolemia or mixed dyslipidemia for an adult in combination with statin or statins with other lipid-lowering therapies and adjuvant to diet in the patients who are statin intolerants, or to the patients who are contraindicated to statins.

Category

ACL Inhibitor, a lipid-lowering agent.

Chemical Classification

Antihyperlipidemic drugs (hypolipidemic drugs).

Drug Image or Label



References

- 1."Nexletol- bempedoic acid tablet, film coated". DailyMed. 10 March 2020. Retrieved 19 March 2020.
2. Jump up to:"Nilemdo EPAR". European Medicines Agency (EMA). 29 January 2020. Retrieved 24 April 2020. This article incorporates text from this source, which is in the public domain.
3. Jump up to: "Nexletol: FDA-Approved Drugs". U.S. Food and Drug Administration (FDA). Retrieved 21 February 2020.
4. Jump up to: Bilen O, Ballantyne CM (October 2016). "Bempedoic Acid (ETC-1002): An Investigational Inhibitor of ATP Citrate Lyase". Current Atherosclerosis Reports.
5. Jump up to: Ray KK, Bays HE, Catapano AL, et al. (CLEAR Harmony Trial) (March 2019). "Safety and Efficacy of Bempedoic Acid to Reduce LDL Cholesterol". New England Journal of Medicine.
6. Jump up to: "Bempedoic Acid". Esperion Therapeutics. Retrieved 15 March 2019.
7. Pathy K (2019). "Bempedoic Acid a Small Molecule Drug Process and Synthesis, Innovation And /Or Advantages, Development Status And /Or Regulatory Status". Surgery & Case Studies: Open Access Journal.

8. "Nilemdo: Pending EC decision". European Medicines Agency (EMA). 30 January 2020. Retrieved 21 February 2020.
9. "Nustendi: Pending EC decision". European Medicines Agency (EMA). 30 January 2020. Retrieved 21 February 2020.
10. "Esperion Announces FDA Approval of Nexletol (bempedoic acid) Tablet, an Oral, Once-Daily, Non-Statins LDL-Cholesterol Lowering Medicine". Esperion Therapeutics, Inc. (Press release). 21 February 2020. Retrieved 21 February 2020.
11. "FDA Approves Drug That Lowers Cholesterol in a New Way". The New York Times. Associated Press. 21 February 2020. Retrieved 21 February 2020.
12. McGinley L (21 February 2020). "FDA approves first non-statin pill to treat high cholesterol in almost two decades". The Washington Post. Retrieved 21 February 2020.
13. Jump up to: "Drug Trials Snapshots: Nexletol". U.S. Food and Drug Administration. 21 February 2020. Retrieved 27 March 2020. This article incorporates text from this source, which is in the public domain.

Volume 1 Issue 1 September 2020

©All rights reserved by C. Reshma, S. Aravind.