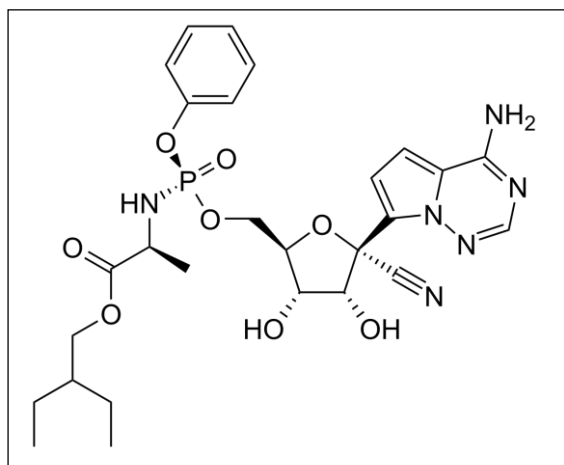




REVIEW ON CONTRARY EFFECTS OF REMDESIVIR

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ABSTRACT

The Acute and Chronic effects of Medication Remdesivir, sold under the brand name Veklury and developed by Gilead Sciences, are discussed in the Review. This antiviral medication was given to the victims of the Pandemic Disease- Covid-19.

Molar mass: 602.585 g/mol

ChEMBL Id: 4065616

ChemSpider ID: 58827832

Formula: C₂₇H₃₅N₆O₈P

Pronunciation: /rɛm'dɛsɪvɪər/ rem-DESS-i-veer

Other names: GS-5734

AHFS/Drugs.com: Monograph

This Drug helped the patients overcome the illness but had grave after- shocks as stated and explained below.

Keywords: Remdesivir, Chronic, Acute, Kidney, Liver.

Remdesivir **(Intravenous Route)**

Brand Name :- *Veklury*.

Descriptions :-

Remdesivir injection is used to treat coronavirus disease 2019 (COVID-19) in hospitalized patients. It is also used to treat mild to moderate COVID-19 in non-hospitalized patients who are at high risk for progression to severe COVID-19 (eg, hospitalization, death).

Remdesivir is an antiviral medicine that works against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).

This medicine is to be given only by or under the immediate supervision of your doctor.

This product is available in the following dosage forms:

- **Solution**
- **Powder for Solution**

Before Using

In deciding to use a medicine, the risks of taking the medicine must be weighed against the good it will do. This is a decision you and your doctor will make. For this medicine, the following should be considered:

Allergies

Tell your doctor if you have ever had any unusual or allergic reaction to this medicine or any other medicines. Also tell your health care professional if you have any other types of allergies, such as to foods, dyes, preservatives, or animals. For non-prescription products, read the label or package ingredients carefully.

Pediatric

Appropriate studies performed to date have not demonstrated pediatric-specific problems that would limit the usefulness of remdesivir injection in children 28 days of age and older and weighing at least 3 kilograms (kg). Safety and efficacy have been established.

Geriatric

Appropriate studies performed to date have not demonstrated geriatric-specific problems that would limit the usefulness of remdesivir injection in the elderly. However, elderly patients are more likely to have age-related liver, kidney, or heart problems, which may require caution in patients receiving remdesivir injection.

Breastfeeding

There are no adequate studies in women for determining infant risk when using this medication during breastfeeding. Weigh the potential benefits against the potential risks before taking this medication while breastfeeding.

Drug Interactions

Although certain medicines should not be used together at all, in other cases two different medicines may be used together even if an interaction might occur. In these cases, your doctor may want to change the dose, or other precautions may be necessary. When you are receiving this medicine, it is especially important that your healthcare professional know if you are taking any of the medicines listed below. The following interactions have been selected on the basis of their potential significance and are not necessarily all-inclusive.

Using this medicine with any of the following medicines is usually not recommended, but may be required in some cases. If both medicines are prescribed together, your doctor may change the dose or how often you use one or both of the medicines.

- **Chloroquine**
- **Hydroxychloroquine**

Other Interactions

Certain medicines should not be used at or around the time of eating food or eating certain types of food since interactions may occur. Using alcohol or tobacco with certain medicines may also cause interactions to occur. Discuss with your healthcare professional the use of your medicine with food, alcohol, or tobacco.

Other Medical Problems

The presence of other medical problems may affect the use of this medicine. Make sure you tell your doctor if you have any other medical

problems, especially:

- **Kidney disease**—Use with caution. The effects may be increased because of slower removal of the medicine from the body.
- **Liver disease**—Use with caution. May make this condition worse.

Proper Use

A nurse or other trained health professional will give you this medicine in a medical facility. It is given through a needle placed into one of your veins. It must be given slowly, so the needle will have to stay in place for at least 30 to 120 minutes.

This medicine comes with a patient information leaflet. Read and follow these instructions carefully. Ask your doctor or pharmacist if you have any questions.

Hospitalized patients: This medicine is usually given once a day for 5 to 10 days. Your doctor will decide how many doses you need.

Non-hospitalized patients: You should receive this medicine within 7 days of the onset of COVID-19 symptoms. This medicine is usually given once a day for 3 days.

Precautions

It is very important that your doctor check your progress closely while you are receiving this medicine to make sure that it is working properly. Blood and urine tests may be needed to check for unwanted effects.

This medicine may cause serious allergic reactions, including infusion-related reactions and anaphylaxis, which can be life-threatening and require immediate medical attention. Tell your doctor right away if you start to have a fever, chill or shaking, dizziness, headache, hoarseness, increased sweating, trouble breathing, trouble swallowing, itching or skin rash, lightheadedness, fainting, fast, pounding, or uneven heartbeat, or any swelling of your hands, face, or mouth after receiving this medicine.

Do not receive remdesivir together with chloroquine phosphate or hydroxychloroquine sulfate.

Side Effects

Acute Effects

Short term effects of Remdesivir are listed below:

- ✓ **Back Pain**
- ✓ **Chest Tightness**
- ✓ **Dark-coloured Urine**
- ✓ **Hives**
- ✓ **Light-coloured Stools**
- ✓ **Nausea**
- ✓ **Ulceration**
- ✓ **Discoloration of skin**

Explained in Detail

Back Pain

Intake of Remdesivir causes *Spinal Stenosis*. This leads to the narrowing of the Spinal column and arouses Acute Lower Back Pain.

Chest Tightness

An elderly male reported Cardiac Complications which turned out to be *Arrhythmias* (Irregular heartbeat) under Remdesivir Therapy. He and several other elderly patients experiences chest tightness on account of the same.

Dark Coloured Urine

Remdesivir caused Liver and Kidney damage. Because of which the Kidneys failed and the colour of urine managed to turn from Light Yellow to Dark Brown due to insufficient Filtration of Water.

Hives

Remdesivir, in spite of being an Anti-viral Medication, constituted allergens like Histamines which caused an Allergic Reaction (Hives or Itching) in many victims allergic to such compounds.

Light-coloured Stools

Our liver produces a pigment called *Bile* which gives colour to our *Faeces*. Remdesivir stunts Bile Production in Liver leading to Light-coloured Stools.

Nausea

Remdesivir caused problems in the Gastrointestinal Tract which lead to the cases of Gastro paresis after

treatment initiation. Such diseases caused severe nausea in most of the patients.

Ulceration

Remdesivir is an NSAID (Non-Steroidal Anti-Inflammatory Drug). It breaks down the stomach's defence against the acid (HCl) it produces to digest food. The stomach lining becomes damaged causing the Formation of a Gastric Ulcer.

Discoloration of Skin

Remdesivir contains RNA polymerase which cuts down Viral Replication. One of the most common contrary effect of this compound is the Discoloration of Skin.



Chronic Effects

Long term effects of Remdesivir are listed below:

- ✓ **Inflammation of Liver**
- ✓ **AKI**
- ✓ **Cardiovascular Problems**
- ✓ **Lung Problems**
- ✓ **Renal Failure**
- ✓ **Hyperthermia**
- ✓ **Hypothermia**
- ✓ **Blood not Clotting**

Explained in Detail

Inflammation of Liver

Remdesivir is responsible for the increase in alanine aminotransferase (ALT) and aspartate aminotransferase (AST). The increased levels of such compounds leads to the inflammation of liver.

AKI

Remdesivir causes Acute Kidney Injury (AKI) leading to proximal tubular epithelial cell necrosis which causes Dark Brown urine and also sometimes Kidney Failure.

Cardiovascular Problems

Remdesivir slows down heart rate in victims causing Palpitations, Sinus Bradycardia, Prolonged QT interval and sometimes Cardiac Arrest or even Complete Heart Attack increasing its Mortality rate.

Lung Problems

Research shows that Remdesivir reduces viral load in Broncho alveolar lavage fluid and attenuated pulmonary infiltrates. This gave rise to Lung Fibrosis in patients.

Renal Failure

Remdesivir causes kidneys to lose their filtering ability, dangerous levels of wastes may accumulate, and the victim's blood's chemical makeup may get out of balance causing Renal or Kidney Failure.

Hyperthermia

Remdesivir gives rise to a disorder called Long QT Syndrome which can potentially cause fast, chaotic heartbeats. Indirectly leading to Hyperthermia.

Hypothermia

Metabolites present in Remdesivir lead to a drop in the victim's body temperature giving rise to Hypothermia.

Blood not Clotting

Remdesivir can stunt the formation to form blood clots. It can elevate the victim's prothrombin time — which is a reading that can be obtained from a blood test. This hypothetically raises the risk for bleeding-related complications.

Conclusion

Remdesivir saved millions of lives during the COVID-19 Pandemic but the survivors were dying potentially given to its adverse Long-term and Short-term effects.

With respect to mortality, the investigators found that, of the patients receiving remdesivir, 602 (14.5%) died, whereas 643 (15.6%) of those allocated to the control drug died (mortality rate ratio [RR], 0.91; 95% CI, .82-1.02; $P = .12$). In those already ventilated, 151 (42.1%) of 359 receiving remdesivir expired, compared with 134 (38.6%) of 347 receiving the control drug (RR, 1.13; 95% CI, 0.89-1.42; $P = .32$).

The data also revealed that 14.6% of all patients who were not ventilated but receiving oxygen and remdesivir died, compared with 16.3% in the control group (RR, 0.87; 95% CI, 0.76-0.99; $P = .03$). In the 1730 patients not originally receiving oxygen, 2.9% receiving remdesivir expired, compared with 3.8% of the control group (RR, 0.76; 95% CI, 0.46-1.28; $P = .30$).

This survey was done by WHO (World Health Organisation) on 14,304 hospitalised COVID-19 patients.

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