



SRI VENKATESWARA COLLEGE OF PHARMACY

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Principal's Message

It gives me immense pleasure that our department of pharmacy practice, Sri Venkateswara College of Pharmacy is releasing its news letter. The clinical pharmacy activity of our pharmacy practice department has gained strength in the last couple of years with the start of Pharm.D programme and our faculty and students are involved in patient services activities in clinical departments of RVS hospitals, a tertiary care super specialty hospital. It is indeed a matter of great pride and pleasure to share some of our experiences in patient care with everyone of you. Practice directions and other documents will be drafted and approved with the assistance of the standards of practice committee. The mandate of the college is to train high caliber health care professionals, offer specialized pharma services to the community, conduct research, offer consultancy services and participate in health policy formulation. The college has adequate and modern facilities to execute its mandate. The faculty and student editorial team deserve special appreciations and offer this news letter to our beloved chairman and vice chairman.

Dr.S.K.Sridhar

Principal

Sri Venkateswara College of Pharmacy

IN THE CURRENT ISSUE

- **Drug profile**
- **Disease based information**

DRUG PROFILE VERICIGUAT

A.CHARAN CHANDU, PHARM.D V YEAR

Generic Name : Vericiguat

Brand Name : Verquvo

Approved on : 20/01/2021

Class of Drug : Guanylate cyclase stimulator

Category : Antiheart failure agent.

Manufactured By : Bayer and meck companies in U.S

Available doses & strengths:

Tablets : 2.5mg, 5mg, and 10mg.

Pharmacokinetics :

Absorption :

- Vericiguat(active drug), Tmax, Oral: 1 hour
- Vericiguat(active drug), Bioavailability: about 93%
- Vericiguat(active drug), Effect of food: Food will increase bioavailability and tmax (upto 4 hours).

Distribution:

- Vericiguat (active drug), Vd:44 lit/kg
- Vericiguat (active drug), Protein binding: approximately 98%.

Metabolism

- Hepatic: It is primarily metabolized via phase II conjugation reactions.
- Vericiguat N-glucuronide: active

Excretion

- 55% of vericiguat is eliminated through urine.
- 45% of vericiguat is eliminated through feces.
- Elimination half life of vericiguat in heart failure patients is 30 hours.
- Vericiguat is a low clearance drug, with an observed plasma clearance

Pharmacodynamics :

Mechanism of action

- Vericiguat directly stimulates soluble guanylate cyclase by binding to a target site on its beta-subunit, bypassing the need for nitrous oxide- mediated activation, and in doing so causes an increase in the production of intracellular cGMP that results in vascular smooth muscle relaxation and vasodilation.

Adverse effects :

- Hypotension, anaemia and fainting are the adrs of vericiguat

System wise ADR :

SYSTEM	POSSIBLE ADRs
Cardiovascular system	Hypotension
Central nervous system	Fainting
Haemopoetic system	Anemia

Contraindications:

1. Hypotension
2. Pregnancy conditions
3. Patients taking other soluble guanylate cyclase stimulators.

General precautions:

- In pregnancy
- patients already taking other soluble guanylate cyclase stimulators
- patients who are taking PDE5 inhibitors.
- Dose should be reduced in anemia.

Storage : Vericiguat is stored at 20-25°C(68-77°F); excursions permitted between 15°C to 30°C. Keep away from children.

DISEASE BASED INFORMATION: SLEEP DISORDERS

Chandaka Jyothi, IV year Pharm.D

Sleep disorders are conditions that impair one's sleep or prevent from getting restful sleep and, as a result, can cause daytime sleepiness and other symptoms.

Epidemiology :

By 2020, the number of people killed in motor-vehicle crashes is expected to double to 2.3 million worldwide, of which approximately 230 000–345 000 will be due to sleepiness or fatigue. Similarly, disturbed sleep has been shown to double the risk of a fatal accident at work over a 20-year period.

Etiology :

Sleep problems can be caused by various factors. Although causes might differ, the end result of all sleep disorders is that the body's natural cycle of slumber and daytime wakefulness is disrupted or exaggerated. Eight factors include:

- Physical (such as ulcers).
- Medical (such as asthma).
- Psychiatric (such as depression and anxiety disorders).
- Environmental (such as alcohol).
- Working the night shift (this work schedule messes up “biological clocks.”)
- Genetics (narcolepsy is genetic).
- Medications (some interfere with sleep).
- Aging (about half of all adults over the age of 65 have some sort of sleep disorder. It is not clear if it is a normal part of aging or a result of medicines that older people commonly use).

Types of sleep disorders :

There are approximately 80 different types of sleep disorders. The top ones are:

- Insomnia : Insomnia is a sleep disorder where people have difficulty falling or staying asleep.
- Sleep apnoea: Sleep apnoea is a potentially serious sleep disorder that occurs when a person's breathing is interrupted during sleep.
- Restless legs syndrome: Restless legs syndrome (RLS) is a sleep disorder that causes an intense, often irresistible urge to move the legs.
- Narcolepsy: Narcolepsy is a neurological disorder of sleep regulation that affects the control of sleep and wakefulness.

Symptoms of sleep disorders :

Some signs of sleep disorder are:

- More than 30 minutes each night to fall asleep
- several times each night and then have trouble falling back to sleep, or you wake up too early in the morning
- More sleepy during the day
- Snore loudly, snort, gasp, make choking sounds
- Legs or arms jerk often during sleep
- Muscle weakness when you are angry or fearful, or when you laugh

Diagnosis :

- Polysomnography is a detailed study of overnight sleep.
- ECG and EEG (brain waves-level of sleep)
- Ventilatory variables: movement of chest wall and airflow at the mouth and noise.
- Arterial oxygen saturation (ear/finger oximetry)

FDA Approved treatment for sleep disorders :

- Benzodiazepines
- Non-benzo hypnotics: Type1 Gaba receptors
- Eszopiclone
- Rozerem

Non pharmacological management :

- Cognitive behavioural therapy (CBT)
- Practicing sleep hygiene such as keeping a regular sleep schedule.
- Regular exercise
- Minimize light and noise during sleep
- Maintaining a comfortable temperature.



Suggestions and comments may kindly be sent to Editorial Board, Department of Pharmacy Practice, SVCOP, Chittoor. Phone: 7729999181 Email:editorsvcopnewsletter@svcop.in