



SRI VENKATESWARA COLLEGE OF PHARMACY (Autonomous)

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Principal's Message

gives me immense pleasure that our department of pharmacy practice, Sri Venkateswara College of Pharmacy is releasing its newsletter. The clinical pharmacy activity of our pharmacy practice department has gained strength in the last couple of years with the start of the Pharm.D program 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 every one 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 healthcare professionals, offer specialized pharmaceutical services to the community, conduct research, offer consultancy services, and participate in health policy formulation. The college has adequate modern facilities to execute its mandate. The faculty and student editorial team deserve special appreciation and offer this newsletter to our beloved chairman and vice chairman.

Dr. D. Jothieswari, Principal,
Sri Venkateswara College of Pharmacy

IN THE CURRENT ISSUE

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

DRUG PROFILE CONCIZUMAB

Concizumab (brand name: Alhemo) is a recombinant monoclonal antibody designed for the prophylaxis of bleeding episodes in patients with hemophilia A or hemophilia B, regardless of the presence of inhibitors. It is a novel therapy targeting a specific pathway involved in clot formation. Concizumab was approved by the FDA in 2024, marking a significant advancement in hemophilia treatment, especially for patients who are not well-controlled by existing therapies.

Uses

- Routine prophylaxis to prevent or reduce the frequency of bleeding episodes in individuals with hemophilia A or B, with or without inhibitors.
- Suitable for adolescent and adult patients who require long-term bleeding prevention.

Mechanism of Action

Concizumab is a tissue factor pathway inhibitor (TFPI) antagonist:

- TFPI regulates the tissue factor (TF)-dependent pathway of blood coagulation by inhibiting Factor Xa and tissue factor-Factor VIIa complex.
- In patients with hemophilia, excessive TFPI activity contributes to impaired clot formation.
- Concizumab inhibits TFPI activity, thereby increasing thrombin generation, which promotes effective clot formation. This targeted mechanism helps to restore hemostasis and prevent spontaneous bleeding episodes in hemophilia patients.

Adverse Drug Reactions

Common adverse reactions observed during clinical trials include:

- Injection site reactions (redness, swelling, or pain)
- Headache
- Fever
- Hypersensitivity reactions (rash, pruritus, or mild allergic reactions)

Severe reactions (rare):

Thromboembolic events: Overactivation of clotting may increase the risk of thrombosis.

Anaphylaxis: Serious allergic reactions require immediate discontinuation.

Monitoring: Patients should be closely monitored for signs of hypersensitivity and thrombosis.

Dosing Considerations

Administration Route: Subcutaneous injection

Initial Dose: A loading dose may be required to achieve therapeutic levels quickly, followed by maintenance dosing.

Maintenance Dose: Typically administered once daily or as recommended based on clinical trials.

Adjustment Factors: Dosing adjustments may be necessary based on patient weight, bleeding risk, or the presence of inhibitors.

Special Populations

Pediatric use: Safety and efficacy in children under 12 have not been fully established.

Renal or hepatic impairment: Adjustments may be necessary, as the pharmacokinetics in these populations are not well-studied.

Limitations of Use

Not for Acute Bleeding Episodes: Concizumab is not designed to manage active bleeding; other clotting agents should be used in such situations.

Advantages Over Existing Therapies

Concizumab offers the convenience of subcutaneous administration compared to traditional intravenous infusions, making it easier for patients to manage at home. Its unique mechanism addresses an unmet need in patients with inhibitors who may not respond well to factor replacement therapy.

Clinical Trials and Efficacy

In clinical trials, concizumab demonstrated a significant reduction in annualized bleeding rates (ABR) compared to standard care. Patients reported improved quality of life and fewer spontaneous bleeds.

DISEASE BASED INFORMATION OROPOUCHE FEVER

Introduction

Oropouche fever is an emerging infectious disease caused by the Oropouche virus (OROV), primarily transmitted to humans through the bite of infected biting midges (*Culicoides paraensis*) and certain mosquito species. Historically confined to the Amazon basin, recent outbreaks have extended beyond this region, raising public health concerns.

Signs and Symptoms

Symptoms typically appear 4 to 8 days after exposure and may include

Fever: Sudden onset of high fever.

Headache: Intense headaches.

Myalgia: Muscle pain.

Diagnosis

Clinical Evaluation: Assessment of symptoms and recent travel history to endemic areas.

Laboratory Tests

RT-PCR: Detection of viral RNA in blood samples.

Treatment

There is no specific antiviral treatment for Oropouche fever. Management focuses on relieving symptoms:

Rest and Hydration: Ensuring adequate fluid intake.

Analgesics and Antipyretics:

Medications like acetaminophen to reduce pain and fever.

Prevention

Vector Control: Reducing populations of biting midges and mosquitoes through insecticide use and eliminating breeding sites.

Recent Developments

As of 2024, Oropouche virus has been identified in regions outside the Amazon basin, including cases in the United States among travelers returning from Cuba. The World Health Organization has raised concerns about the virus's spread and its potential impact on public health.



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