



A Newsletter on
CLINICAL PHARMA PRACTICE
An Update on Clinical Research and Drug Information



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Department of Pharmacy Practice,
Swamy Vivekanandha College of Pharmacy,
Tiruchengode, Namakkal (Dt), Tamilnadu.
E-mail : svcpdpic@gmail.com

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PHARMACIST DESK

H3N2 VIRUS (INFLUENZA - A)

Seasonal influenza is an acute respiratory infection caused by influenza virus which is affecting a significant portion of the population. The rise in flu cases has frightened the general public after battling two years of the COVID pandemic. There are 4 types of influenza viruses, type A, B, C, and D which were further classified into many subtypes. H3N2 which is a subtype of influenza A virus were currently circulating in humans.

EPIDEMIOLOGY

Annual seasonal influenza epidemics result in around 290,000 - 650,000 death worldwide and infect upto 20 % of the population, depending on circulating viral strains. On 6th March, Karnataka reported India's first death from the H3N2 virus.

TRANSMISSION

Seasonal influenza spreads easily with rapid transmission in crowded areas including schools and nursing homes. When an infected person coughs or sneezes, droplets containing viruses are dispersed into the air and infect persons in close proximity who breathe the droplets in. The incubation period of the infection is about 2 days but ranges from 1 to 4 days.

SIGNS & SYMPTOMS

- ★ Sudden onset of fever
- ★ Cough (usually dry)
- ★ Headache
- ★ Muscle and joint pain
- ★ Severe malaise
- ★ Sore throat
- ★ Runny nose

DIAGNOSIS

- ★ Direct antigen detection
- ★ Virus isolation
- ★ RT-PCR

TREATMENT

- ★ The Indian Council of Medical Research (ICMR) recommends symptomatic treatment rather than antibiotics.
- ★ Advised to stay home in order to minimize the spread of the infection.
- ★ Patients with severe or progressive clinical illness associated with suspected or confirmed influenza virus infection should be treated with antiviral drugs.



ABI MONIKA A.P, Pharm.D Intern.

DRUG MONOGRAPH

<p><u>ZAVZPRET</u></p> <p>CATEGORY : Calcitonin gene-related peptide (CGRP) receptor antagonist.</p> <p>MECHANISM OF ACTION : The active ingredient is zavegepant which binds to the CGRP receptor as an antagonist and produces a potent neuromodulator and vasodilator. CGRP is a peptide released by the trigeminal nerve during migraine attacks and thus blocking it will help in treating acute migraines.</p> <p>INDICATION : Acute treatment of migraine with or without aura in adults.</p> <p>DOSE & DOSAGE : 10 mg : Nasal spray; 10 mg given as a single spray in one nostril, as needed.</p>	<p>The maximum dose in a 24 hour period is 10 mg (one spray).</p> <p>CONTRAINDICATION : It should not be used by patients with a history of hypersensitivity reactions like facial swelling.</p> <p>PRECAUTIONS : Patients with severe hepatic impairment, renal clearance less than 30ml/min, and patients with greater than 65 years of age.</p> <p>ADVERSE REACTIONS : Taste disorders, Nausea, Nasal discomfort, and Vomiting.</p> <p>BRAND NAME : ZAVZPRET</p> <p>DRUG APPROVED ON : March 3, 2023.</p>
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CASE DISCUSSION

A 58 - year - old male patient was brought to ER in a state of unconsciousness and breathing difficulty for past few hours. History of productive cough for past 3 days. He had a past history of encephalopathy, Hypothyroidism (on T. Thyronorm 12.5 mcg), and S/P Tracheostomy 1 year back. On examination, GCS - E2M5VT, the patient had desaturation at room air, dyspnoea, and tachypnoea, so connected to mechanical ventilation. We had difficulty in weaning off the patient from mechanical ventilation with plenty of secretions. On evaluation, his acetylcholine receptor antibody levels were elevated and were suggestive of Myasthenia Gravis. Then medications worsening Myasthenia Gravis were stopped and the patient was started on steroids, Azathioprine, and Pyridostigmine. Patient symptomatically improved and was weaned off from the ventilator.

DISCUSSION :

The patient had LRTI which triggered to cause myasthenic crisis, resulting in breathlessness. Further on admission patient had Type II respiratory failure and fever which might have caused encephalopathy. Myasthenic crisis improved with antibiotics, by avoiding medications which should be avoided in Myasthenia Gravis and with steroids. CT Chest was normal without thymoma.

The patient was diagnosed with Myasthenia Gravis/ Myasthenic crisis, Septic encephalopathy, Type II respiratory failure.

Myasthenia gravis (MG) is a neuromuscular disorder characterized by muscle weakness and muscle fatigue. In MG the immune system produces antibodies that bind to the nicotinic receptor, thus inhibiting the binding of acetylcholine to the nicotinic receptor at the post-synaptic membrane, as a result, muscle contraction is inhibited leading to muscle weakness and these antibodies also activate the complement system within the neuromuscular junction, thus damaging the cells of postsynaptic membrane, and worsening the symptoms.

CONCLUSION :

Whenever we find difficulty in weaning off the patient from mechanical ventilation. (Without any specific cause) we should rule out Myasthenia Gravis.

Dr. V. KANNAN, M.D., D.M (Neuro),
Consultant Neurologist,
Vivekanandha Medical Care Hospital, Tiruchengode.

Ms. K. KRITIKA
Pharm. D Intern

DRUG SAFETY ALERTS IDENTIFIED AND ISSUED BY PVPI

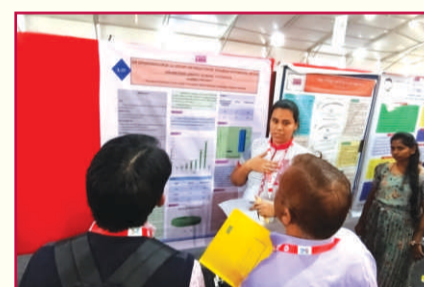
ISSUING DATE	SUSPECTED DRUGS	INDICATION(S)	ADVERSE DRUG REACTION
31.01.2023	Amphotericin B (Liposomal)	Indicated for Febrile Neutropenia in cancer patients, invasive fungal infection in patients who are refractory to or intolerant of conventional amphotericin B therapy, visceral leishmaniasis.	Hearing disorders Tachycardia
20.02.2023	Cephalosporins	Indicated to manage a wide range of infections from Gram-positive and Gram-negative bacteria.	Purpura
	Amikacin	Indicated in the treatment of serious infections due to amikacin-sensitive organisms.	Vision blurred
29.03.2023	Metoprolol	Indicated for essential hypertension in adults, functional heart disorders, migraine prophylaxis, cardiac arrhythmias, prevention of cardiac death and reinfarction after the acute phase of myocardial infarction, stable symptomatic CHF	Hyponatraemia
	Nebivolol	Indicated for the treatment of essential hypertension	Hyperkalaemia
	Olmesartan	Indicated for Anti-hypertensive	Muscle Spasm Taste Disorder
	Sulfasalazine	Indicated for the treatment of severe rheumatoid arthritis, ulcerative colitis; Crohn's disease.	Visual Impairment
24.04.2023	Ziprasidone	Indicated for the treatment of schizophrenia, rapid control of agitation in psychotic patients	Drug Reaction with Eosinophilia and Systemic Symptoms

SWAMY VIVEKANANDHA COLLEGE OF PHARMACY - ADR MONITORING CENTRE

DEPARTMENT ACTIVITIES

STUDENTS PARTICIPATION IN CONFERENCE

- ❖ Pharm. D Interns participated and presented posters in the 72nd IPC held at Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur, Maharashtra from 20.01.2023 to 22.01.2023.



GUEST LECTURE / WEBINAR ORGANISED

Date : 30.01.2023
Topic : Patient - Centric Drug Information Service for Reducing Medication Errors
Speaker : **Mr. Vikas Arora**,
 Director, Infokart India Pvt Ltd.

Date : 31.01.2023
Topic : Career Guidance for International and Domestic Educational Programme
Speaker : **Mr. Sony Akkara**,
 Easy Link Academy.

Date : 29.03.2023
Topic : Integrated approach of yoga and naturopathy in polycystic ovary syndrome
Speaker : **Dr. Jyoti Nair**,
 Principal, Swamy Vivekanandha and Yoga and Naturopathy Medical College, Sankagiri.



ALUMNI TALK

Date : 17.02.2023
Topic : Role and Responsibilities of clinical pharmacists
Speaker : **Dr. Sharon Sara Mathew,**
Pharmacy Assistant, Foothills hospital, Canada.

Date : 07.03.2023
Topic : Opportunities and Experiences in Pharm. D career
Speaker : **Dr. Amritha Lekshmi,**
Staffing Manager, The Key, Canada

OUTREACH ACTIVITIES

WORLD CANCER DAY

II - Pharm. D students commemorate World Cancer Day with the theme of "Close the Care Gap" on 04th February 2023 at Erode Cancer Centre.

NATIONAL SCIENCE DAY

ISPOR-SVCP student chapter organized National Science Day and conducted various events like Spot Test, Read and Formulate, Patient Counseling, E - Poster Presentation, Drawing, Essay Writing, Elocution and Disease the Organ on 28th February 2023 and cash prizes were awarded.

INTERNATIONAL WOMEN'S DAY

V Pharm. D students commemorate International Women's Day with the theme of "Digit ALL : Innovation and Technology for Gender Equality" Ms. Sinega B.N, Law Student, Vice President - All India Students Federation gave an invited talk on 8th March 2023.

STUDENTS AWARDS & ACHIEVEMENT

★ **Ms. Divya Bharathi S** of V - Pharm. D presented poster and selected for oral presentation in 72nd IPC Nagpur, Maharashtra from 20.01.2023 to 22.01.2023

★ **Ms. Aditya, Ms. Divya Bharathi S, Ms. Anu Sree and Ms. Sneha Anna of Pharm.D interns and Ms. Femina of V Pharm.D** participated in the final round of zonal championship at IIT-Delhi during 10th to 12th March 2023.

World Cancer Day



National Science Day



Final Round At IIT, Delhi.



PUBLICATIONS

- ★ Sharmila Nirojini P, Asma Fathumuthu M. A Detailed Review on Dihydropyrimidine Dehydrogenase Enzyme Deficiency-Autosomal Recessive Condition. Indian Journal of Pharmacy Practice.2023; 16(2): 52-64.
- ★ Anna Joseph, Anusree, Archana K S, Aswini S Binu, Bhuvaneshwari N.K, Tamizharasan M, Nithyakala P. A review of radiation proctitis and currently available treatments. International Journal for Research Trends and Innovation.2023; 8(2):384-386.
- ★ Nithyakala P, Divya R P, Femina H, Gayathri P, Jensilin Devakumari T, Jessly Lalu. Fibroid Uterus - An Overview and Case Study. International Journal of Science and Research. 2023;12(2):136-138.
- ★ Karthiga R, Karthika J, MegaSree H, Monika S, Monisha S, Nithya R. Tentorial Subdural Hematoma Following Hypertension - A Case Study. International Journal of Innovative Science and Research Technology. 2023; 8(3): 1373-1375.
- ★ Malarvizhi. P, Neesha Solanky. K, Redlin Jani. R.R. Severe thrombocytopenia with oseltamivir treatment for viral fever-A Case Study. International Journal of Pharmaceutical Research and Applications.2023;8(1):2441-2444.
- ★ Malarvizhi. P, Priyadarshini. P, Roja. M.K, Samyuktha. D, V. Saranya, R, Shruthi. D. Availability of essential medicines in the tertiary care hospital 2022-2023.International Journal of Sciences and Research. 2023;12(2):1640-1647.
- ★ Nithyakala. P, Narmadha. U, Neesha Solanky K, Ramya. A. Antibiotic Resistance in Endodontic Treatments - A Review. International Journal of Dental Science and Clinical Research. 2023; 5(2): 72-82.

SCHEDULED EVENT : 7TH NATIONAL SEMINAR CPP - IGS - 2023 ON 24.06.2023



Please send your suggestions to The Chief Editor

CLINICAL PHARMA PRACTICE NEWSLETTER

Drug & Poison Information Centre,

Department of Pharmacy Practice,

Swamy Vivekanandha College of Pharmacy

Tiruchengode, Namakkal (Dt), Tamilnadu.

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Email-svcpcpic@gmail.com.