



A Newsletter on **CLINICAL PHARMA PRACTICE**

An Update on Clinical Research and Drug Information



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PHYSICIAN DESK

DPP 4 INHIBITORS INDUCED BULLOUS PEMPHIGOID LESIONS



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Bullous pemphigoid (BP) is an autoimmune skin disorder characterized by blister formation, primarily affecting elderly individuals. Its clinical presentation typically includes widespread blisters, often preceded or accompanied by itchy, hive-like, or eczema-like lesions. BP is associated with circulating autoantibodies targeting BP180 and BP230, structural proteins in hemidesmosomes of basal keratinocytes. Most BP autoantibodies target the non-collagenous NC16A domain of BP180. Studies in patients and animal models suggest that anti-NC16A autoantibodies play a significant pathogenic role in BP. However, the mechanisms triggering the loss of immune tolerance to BP180 in older individuals remain poorly understood.

Over the last two decades, the incidence of BP has risen globally. While aging populations contribute to this trend, other factors are not fully identified. Neurodegenerative conditions, including multiple sclerosis, Parkinson's disease, and certain dementias, are recognized as independent risk factors for BP. Recently, there has been increasing evidence linking BP to diabetes mellitus (DM) patients treated with dipeptidyl peptidase-4 inhibitors (DPP-4i or gliptins), a commonly used class of anti-diabetic medications. Epidemiological studies have confirmed the association between DPP-4i use, particularly vildagliptin, and increased BP risk.

In Japan, gliptin-associated BP appears to exhibit distinct features compared to typical BP. These include a "non-inflammatory" phenotype, autoantibodies targeting different BP180 epitopes, and a correlation with specific human leukocyte antigen (HLA) types. However, studies in European populations suggest no significant differences between gliptin-associated BP and conventional BP in terms of clinical and immunological characteristics. The DPP-4 protein, also known as CD26, is widely expressed and involved in various biological processes, including tissue remodeling and immune regulation, particularly of T cells. Although the precise mechanism by which gliptins induce BP remains unclear, further investigation may provide insights into the breakdown of immune tolerance to BP180, shedding light on BP pathogenesis.

DRUG MONOGRAPH XANOMELINE

CATEGORY:

Anti-cholinergic agent, Anti-psychotic agent

INDICATION:

Treatment of schizophrenia in adults.

MOA: Xanomeline is an agonist at M1 and M4 muscarinic acetylcholine receptors in the central nervous system. The reason for its efficacy in schizophrenia is unclear.

Tropium chloride is a muscarinic antagonist. It is a highly polarized tertiary amine, and this prevents it from entering the CNS. As a result, tropium chloride antagonizes the muscarinic receptors primarily in the peripheral tissues

DOSAGE AND ADMINISTRATION:

Oral: Initial: Xanomeline 50 mg and tropium chloride 20 mg twice daily for ≥ 2 days, then increase to xanomeline 100 mg and tropium chloride 20 mg twice daily for ≥ 5 days.

Maximum Dose: Xanomeline 125 mg and tropium chloride 30 mg twice daily.

Take at least 1 hour before a meal or at least 2 hours after a meal. Do not open capsules.

CONTRAINDICATION: History of hypersensitivity (e.g., angioedema) to xanomeline, tropium chloride, or any component of the formulation; urinary retention; moderate (Child-Pugh class B) or severe (Child-Pugh class C) liver impairment; gastric retention; untreated narrow-angle glaucoma.

CAUTION:**Risk of Urinary Retention:**

Geriatric patients and patients with bladder outlet obstruction and incomplete bladder emptying are at increased risk.

Risk of Use in Patients with Hepatic Impairment:

COBENFY is contraindicated in patients with moderate to severe hepatic impairment and is not recommended in patients with mild hepatic impairment.

Risk of Angioedema:

Angioedema of the face, lips, tongue and/or larynx has been reported with COBENFY.

ADVERSE EFFECTS:

Most common adverse reaction (incidence $\geq 5\%$ and at least twice placebo) were nausea, dyspepsia, constipation, vomiting, hypertension, abdominal pain, diarrhoea, tachycardia, dizziness, and gastrointestinal reflux disease.

DRUG APPROVED ON: 26th September 2024

REFERENCE: lexidrug.com

**Sneha Y, Sri Vaishnavi P, Susmitha S
IV Pharm.D**

PHARMACIST DESK

Clinical pharmacist plays a crucial role in enhancing patient safety and healthcare outcomes in India by optimizing medication therapy and promoting evidence-based practices. At our hospital, several cases of postpartum hypertension were reported 6-7 days after surgery in Gynaecology Department. In response, our clinical pharmacist team and pharm-D interns conducted a detailed investigation to identify drug-induced causes. We found that NSAIDs such as Diclofenac and Aceclofenac were commonly used for postoperative pain management. These drugs has the tendency it block prostaglandins, it leads to fluid retention and increased blood pressure. Additionally, high volumes of IV fluids appeared to worsen fluid overload. Considering the association between NSAIDs and hypertension and the American Congress of Obstetricians and Gynecologists' guidelines suggesting NSAID discontinuation, we recommended safer alternatives like acetaminophen or opioids for pain relief and improved fluid management protocols. The absence of new cases highlighted the impact of clinical pharmacists in patient care. To budding pharmacists, focus on continuous learning to contribute meaningfully to India's evolving healthcare system.

**Dr. Anson Sam, Pharm.D.,
Chief Clinical Pharmacist
SVMCH&RI.**

DRUG SAFETY ALERTS IDENTIFIED AND ISSUED BY PvPi

Issuing Date	Suspected Drugs	Indication(s)	Adverse Drug Reaction
25 th Sept' 2024	Tetracycline	Treatment of Rocky Mountain spotted fever, typhus, Q fever, rickettsial pox, tick fever caused by Rickettsiae, respiratory tract infections caused by Mycoplasma pneumonia, Chlamydia infection, chancroid, plague, tularemia, cholera, brucellosis, bartonellosis, granuloma inguinale, haemophilus and klebsella infections, psittacosis.	Fixed Drug Eruption
28 th Nov' 2024	Amphotericin B	<ul style="list-style-type: none"> • Treatment of Febrile Neutropenia in cancer patients. • Treatment for invasive fungal infection in patients, who are refractory to or intolerant of conventional Amphotericin B therapy. • Indicated for the treatment of Visceral Leishmaniasis 	Hyperkalaemia
	Carbimazole	Indicated for the treatment of thyrotoxicosis including thyrotoxicosis crisis.	Agranulocytosis
26 th Dec' 2024	Beta-blockers (Metoprolol, Propranolol, Atenolol)	<p>Metoprolol: For the treatment of 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 and angina pectoris.</p> <p>Propranolol: For the treatment of cardiac arrhythmias; tachycardia; hypertrophic obstructive cardiac myopathy; pheochromocytoma; thrombosis; management of angina; essential and renal hypertension; prophylaxis of migraine.</p> <p>Atenolol: For the treatment of hypertension, angina pectoris, cardiac arrhythmias.</p>	Hypokalaemia

VIVEKANANDHA MEDICAL CARE HOSPITAL – ADR MONITORING CENTER

DEPARTMENT ACTIVITIES

Department of pharmacy practice organized 4th National pharmacovigilance week 2024 from 16th - 23rd September 2024 on the theme "Building ADR Reporting Culture for patient safety".

Street Play was conducted at VMCH, Namakkal on 16th September 2024 as a part of 4th National pharmacovigilance week 2024.



Organized guest lecture on "Role of pharmacist in materiovigilance" by Mr. Nagarjuna Reddy, Manager (ORA), Materiovigilance Alcon, Andhra Pradesh.

Department of pharmacy practice observed "World Pharmacist Day", on 25th September 2024. Mrs. Y Sasikala, chief pharmacist, Swamy Vivekanandha Medical College Hospital and Research Institute, Tiruchengode, grace this occasion as chief guest and conducted debate topic "kalvium kalacharamum 90's Vs 2K".



STUDENTS ACHIEVEMENT



IV Pharm D students won 3rd prize in National level article presentation competition on the topic “From Research to Reality: Mavacamten's Role in Transforming Hypertropic Cardiomyopathy Treatment - A Narrative Review” at Erode College of Pharmacy, Erode held on 4th September 2024.

IV Pharm D students won 3rd prize in ADR Case presentation competition as a part of 4th National pharmacovigilance week on the topic “Lithium Induced Cardiotoxicity” at JKKN College of Pharmacy, Kumarapalayam held on 4th October 2024.

J. Christy Immaculate student V Pharm.D won 2nd prize in poster presentation competition on the theme “Building ADR Reporting Culture for Patient Safety” organized by Clinisol Research Pvt Ltd.



OUTREACH ACTIVITIES



Department of Pharmacy practice conducted ADR awareness programme among Nursing students at Nursing school, Manickampalayam and MBBS students at Swamy Vivekanandha Medical College Hospital and Research Institute, Tiruchengode on 20th and 23rd September 2024.

Department of Pharmacy practice conducted Generic medicine awareness programme among public through pamphlet distribution at Manickampalayam, market on 20th September 2024

IV PHARM D Students observed “World Pollution Day” Pookampalayam village, kumaramangalam on 19th December 2024 and conducted health camp



PUBLICATIONS:

1. Dr. Jayaprakash Kuppusamy, Dr. Dhivyaprasath Palaniappan, Hema V, Kaushika S, Lakshmi Prabha K, Angelin Grace T, Ann Jency A Evaluation of Serum Magnesium Level in Critically Ill Patient and predict their clinical outcome - A Prospective Observational Study. Afr.J.Biomed. Res. 2024;27:1338 - 1344.
2. Dr. R. Subashini, M. Kanishghasree, S. Grace, C. Shifa Sidhiq Fatima, Anupama Sankar and C. Rifa Sidhik Fathima, Digital Twin - An Innovative Strategy in Healthcare Transformation: An Extensive Review, Journal for Research in Applied Sciences and Biotechnology, 2024;3(6):7-19.
3. Smitha Sarah Thambi, P. Lakshmi Priyanka, V. Harineshwari. Role of Serum Aplein and Nitric oxide in Primary Hypertension Patients. World Journal of Pharmaceutical Sciences Sci, 2024; 12(03): 88-94.

Book Post



Please send your suggestions to The Chief Editor
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