



St. Peter's

Institute of Pharmaceutical Sciences

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NEWSLETTER OF CLINICAL PHARMACY

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Vision

St.Peter's is committed to generate, disseminate and preserve knowledge and work with pioneers of this knowledge, and to be the most sought after institute globally in the field of pharmaceutical sciences by creating world class pharmacy professionals and researchers.

Mission

To achieve academic excellence with integrity and creating opportunities for leadership and responsibilities through groundbreaking performance in the field of Pharmaceutical Sciences by educating students with pharmaceutical needs of the society and to advance the knowledge through research and to serve the profession and community.



FDA APPROVED DRUGS JANUARY 2024-AUGUST 2024.

SL.NO	DRUG NAME	ACTIVE INGREDIENT	DATE	INDICATION
1.	Zelsuvmi	berdazimer	1/5/2024	To treat molluscum contagiosum
2.	Exblifep	cefepime, enmetazobactam	2/22/2024	To treat complicated urinary tract infections
3.	Letybo	letibotulinumtoxinA-wlbg	2/29/2024	To temporarily improve the appearance of moderate-to-severe glabellar lines
4.	<u>Tevimbra</u>	tislelizumab-jsgr	3/13/2024	To treat unresectable or metastatic esophageal squamous cell carcinoma
5.	<u>Rezdiffra</u>	resmetirom	3/14/2024	To treat noncirrhotic non-alcoholic steatohepatitis with moderate to advanced liver scarring
6.	<u>Tryvio</u>	aprocitentan	3/19/2024	To treat hypertension
7.	<u>Duvyzat</u>	givinostat	3/21/2024	To treat Duchenne muscular dystrophy in individuals aged 6 years and older
8.	<u>Winrevair</u>	sotatercept-csrk	3/26/2024	To treat pulmonary arterial hypertension
9.	<u>Vafseo</u>	vadadustat	3/27/2024	To treat anemia due to chronic kidney disease
10.	<u>Voydeya</u>	danicopan	3/29/2024	To treat extravascular hemolysis with paroxysmal nocturnal hemoglobinuria

DRUGS APPROVED BY CDSCO JANUARY 2024– AUGUST 2024.

SNO.	NAME OF DRUG	INDICATION	DATE OF ISSUE
1.	Tirzepatide 2.5mg /0.5ml, 5mg/0.5ml, 7.5mg/0.5 ml,10mg/0.5 ml,12.5mg/0.5 ml,15mg/0.5 ml solution for injection in a prefilled pen	Indicated as an adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus	19-01 2024
2.	Plazomicin injection 500mg/10ml (50mg/ml)	Indicated in patients 18 years of age or older for the treatment of complicated urinary tract infections (cUTI), including pyelonephritis caused by the following susceptible microorganism(s) • Escherichia coli, • Klebsiella pneumoniae, • Proteus mirabilis, and • Enterobacter cloacae	02-02-2024
3.	Etifoxine Hydrochloride Bulk drug & Etifoxine Hydrochloride capsules 50 mg	Indicated for psychosomatic manifestations of anxiety	21-03-2024

PEMPHIGUS VULGARIS

INTRODUCTION

Pemphigus vulgaris is an autoimmune blistering disorder that primarily affects the skin and mucous membranes. It is characterized by the production of autoantibodies against desmogleins, which are components of desmosomes, the structures that hold skin cells together. This autoimmune attack results in the formation of blisters and erosions on the skin and mucous membranes.

EPIDEMIOLOGY

-Prevalence: Pemphigus vulgaris is a rare disease, with an incidence ranging from 0.1 to 0.5 per 100,000 people per year. The prevalence varies geographically, with higher rates reported in certain ethnic groups, such as Ashkenazi Jews, people of Mediterranean descent, and those from the Indian subcontinent.

-Age of Onset: The disease typically presents in middle-aged and older adults, with a peak incidence between the ages of 40 and 60. However, it can occur at any age, including childhood.

-Gender: There is no significant gender predilection, though some studies suggest a slightly higher prevalence in females.

ETIOLOGY

Pemphigus vulgaris (PV) is an autoimmune disease in which the immune system mistakenly attacks the body's own cells. The primary cause is the production of autoantibodies against desmogleins, which are adhesion molecules crucial for the integrity of the epidermis.

PATHOPHYSIOLOGY

In PV, autoantibodies target desmoglein-3 (Dsg3) and sometimes desmoglein-1 (Dsg1), components of desmosomes that hold skin cells together. This leads to the loss of cell-to-cell adhesion, resulting in acantholysis (separation of epidermal cells) and the formation of intraepidermal blisters.

CLINICAL MANIFESTATIONS

1. Skin Lesions: Flaccid blisters that rupture easily, leading to painful erosions and crusted lesions.
2. Mucosal Involvement: Oral mucosa is often affected first, presenting with painful ulcers and erosions. Other mucous membranes, such as the conjunctiva, nasal, pharyngeal, laryngeal, esophageal, and genital mucosa, can also be involved.
3. Nikolsky Sign: Gentle pressure on the skin causes the epidermis to separate and form a blister.

COMPLICATIONS

1. Infection: The most common and serious complication of pemphigus vulgaris is secondary infection. The open blisters and erosions can become infected with bacteria, leading to cellulitis, sepsis, and other systemic infections.
2. Dehydration and Electrolyte Imbalance: Extensive blistering and erosion can lead to significant fluid loss, causing dehydration and electrolyte imbalances, which may require hospitalization and intravenous fluids.
3. Nutritional Deficiencies: Oral lesions can make eating painful and difficult, potentially leading to malnutrition and weight loss.
4. Scarring and Skin Changes: While pemphigus vulgaris typically heals without scarring, chronic disease or severe cases may lead to pigmentary changes and, rarely, scarring.
5. Side Effects of Treatment: Long-term use of corticosteroids and immunosuppressive agents, the mainstay of treatment, can result in complications such as osteoporosis, diabetes, hypertension, cataracts, and increased susceptibility to infections.
6. Psychosocial Impact: The chronic nature of the disease, along with its visible symptoms, can lead to significant psychological stress, anxiety, and depression, impacting the patient's quality of life.

DIAGNOSIS

1. Clinical Examination: Observation of characteristic blisters and erosions, and positive Nikolsky sign.
2. Histopathology: Biopsy of an early blister showing acantholysis in the epidermis.
3. Direct Immunofluorescence: Demonstrates IgG and C3 deposition in the intercellular spaces of the epidermis.
4. Indirect Immunofluorescence: Detects circulating autoantibodies in the patient's serum.
5. Enzyme-Linked Immunosorbent Assay (ELISA): Measures the levels of autoantibodies against Dsg1 and Dsg3.

TREATMENT

PHARMACOLOGICAL

1. Corticosteroids: High-dose oral prednisone or prednisolone is the mainstay of treatment. Intravenous corticosteroids can be used for severe cases.
2. Immunosuppressive Agents:
 - Azathioprine
 - Mycophenolate mofetil
 - Methotrexate
 - Cyclophosphamide
3. Biologic Therapies: Rituximab, a monoclonal antibody targeting CD20 on B cells, has shown high efficacy.
4. Adjunctive Therapies:
 - Intravenous immunoglobulin (IVIG)
 - Plasmapheresis to remove circulating autoantibodies

NON-PHARMACOLOGICAL

1. Wound Care: Proper wound care to prevent secondary infections and promote healing.
2. Oral Hygiene: Good oral hygiene practices to manage and prevent oral lesions.
3. Nutritional Support: Adequate nutrition, possibly requiring a soft or liquid diet for patients with severe oral involvement.
4. Pain Management: Analgesics to manage pain associated with blisters and erosions.
5. Patient Education and Support: Educating patients about the chronic nature of the disease, treatment adherence, and potential side effects. Psychological support and counseling may also be beneficial.

COVID-19 INFECTION IMPACT ON RACE AND CLINICAL OUTCOME OF PATIENTS WITH BREAST CANCER : A nationwide analysis.

Introduction:

Breast cancer is the most frequently diagnosed cancer and the leading cause of cancer death in females worldwide. Recent data showed the detrimental effects of COVID-19 infection on other neoplasm conditions, causing increased mortality rates and complications. However, limited information exists on the specific impacts of COVID-19 infection in patients hospitalized for breast cancer, as well as racial impact differences.

Methods:

We analyzed the 2020 U.S. National Inpatient Sample (NIS) to investigate the effects of COVID-19 infection on cases primarily admitted due to breast cancers. Adjusted odds ratios (aORs) for specified outcomes were calculated through multivariable logistic and linear regression analyses. The primary outcome was inpatient mortality, with secondary outcomes including system-based complications. Statistical significance was established at a p-value of 0.05.

Results:

We identified 25,559 patients with a primary discharge diagnosis of breast cancer. The mean age was 59.7 years; 99.28% were female. In the non-COVID group, Caucasians accounted for 60%, followed by African Americans (19%). However, in the COVID-19 group, African Americans predominated with 41%, followed by Caucasian (35%) (p-value = 0.05). Of these, 0.52% (85/25,559) had a concurrent diagnosis of COVID-19 infection. In a survey multivariable logistic and linear regression model adjusting for patient and hospital factors, COVID-19 infection was associated with higher in-hospital mortality (aOR 6.07; 95% CI (1.26, 29.13), $p = 0.024$), higher mean length of stay (b 5.22; 95% CI (2.08, 8.36) $p = 0.001$), acute respiratory failure (aOR 4.88; 95% CI (1.51, 15.77), $p = 0.008$), coagulopathy (aOR 8.38; 95% CI (2.19, 32.02), $p = 0.002$) and SIRS (aOR 6.38; 95% CI (1.25, 32.50), $p = 0.026$). We observed non-significant, but increased, risks of acute kidney injury (AKI), shock, and sepsis, as well as total hospitalization costs in COVID-19- positive patients.

Conclusions:

In conclusion, our study underscores that COVID-19 infection is associated with higher in-hospital mortality and other clinical outcomes in breast cancer patients, as well as, a disproportionated impact against some races. Future longitudinal studies are warranted to comprehensively assess the causation of these clinical outcomes in this population.

DEPARTMENTAL ACTIVITIES:

St. Peter's Institute of Pharmaceutical Sciences hosted a seminar presented by our alumni Mr. Munnawar Ali Mohammad, Senior Freedom of Information Analyst, Government of British Columbia, discussing the development of oral mycophenolate mofetil nanoparticles. The session focused on the methodology for producing nanoparticles and their release in the oral cavity (in vitro).



St. Peter's proudly stands at the pinnacle academic achievement! We are pleased to announce that our College secured 80 Ranks in TG PEGCET-2024. All the rank holders were felicitated with a token of

appreciation.

Hearty Congratulations to all the Rank Holders of TG PEGCET-2024.



St. Peter's Institute of Pharmaceutical Sciences had a wonderful time participating in 73rd IPC Hyderabad 2024. Our Chairman Jayapal Reddy Thumma sir served as Council Member IPCA and Joint Secretary, LOC. He also chaired a session on Artificial intelligence in Pharmaceutical Sciences. Our Principal Dr. Rajeshri Wakode Dhurke served as Scientific Services Committee member. Dr. Praveen Devanandan had the opportunity to be a speaker at the Indian Pharmaceutical Congress for the first time. Covered on impact of Digital Health on Health Literacy. Our Faculty Dr. Ranadheer Chowdary Puvvada, Ms. Manusri Naredla, Mr. G. Sandeep, Dr. Rajasekhara Reddy Poonuru and Dr. Devender Served as Scientific Poster Evaluators. Further, Our faculty Dr. Rajasekhara Reddy Poonuru has presented and received 2nd Prize in Oral Presentation in Pharmaceutical Technology section. More than 40 students attended the Congress - 20 students served as Volunteers, 29 Posters were presented by our students guided by me, Dr. Ranadheer Chowdary Puvvada and Dr. Rajeshri Wakode Dhurke. Our students participated in National Dance Competition finals as well. It was great time attending the Congress - Networking with National and International experts of our profession, met several alumni of St. Peter's Institute of Pharmaceutical Sciences.



Two weeks short-term technique program on Instrument handling from 5th to 16th February 2024





Hands-on training on clinical skill development from 5th to 9th February 2024



On 6th March 2024, conducted a Debate on the occasion of National Pharmacy Education Day.



Pharmacy Premier League Season 2 won by St.Peter's Institute of Pharmaceutical Science at Vaagdevi College of Pharmacy, Bollikunta, Telangana.

