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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 ground breaking 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 APRIL 2022- OCTOBER 2022

SL.NO	DRUG NAME	BRAND NAME	INDICATION	ADVERESE REACTION
1.	TADALAFIL	LUPIN LTD	Erectile dysfunction, pulmonary arterial hypertension	headache, flushing, nausea,myalgia,facial edema
2.	LURBINECTEDIN	JAZZ	Metastatic small-cell lung cancer	fatigue,vomiting,leukopenia,anemia,nausea,dyspnea
3.	MARALIXIBAT CHLORIDE	MIRUM	Cholesteric pruritus in patient with Alagille syndrome	diarrhea,vomiting,bone fracture, nausea
4.	FLUPHENAZINE HYDROCHLORIDE	TWI PHARMS	psychotic disorders	cerebral edema,restlessness,hypotension ,eczema
5.	LEVOFLOXACIN	ZYDUS LIFESCIENCES	UTI, acute pyelonephritis, community acquired pneumonia	chest pain,diarrhea,edema,dyspnea,anxiety
6.	VANCOMYCIN HYDROCHLORIDE	MYLAN LABS LTD	Endocarditis,LRTI,Clostridioides difficile infection	hypokalemia,nausea,fatigue, diarrhoea
7.	DICLOFENAC SODIUM	FOUGERA PHARMS	acute pain, osteoarthritis pain in joints	Paraesthesia ,pain, migraine, diarrhoea
8.	METRONIDAZOLE	WATSON LABS	bacterial vaginosis and trichomonas's	vaginal discharge ,UTI
9.	ZOLEDRONIC ACID	INFORLIFE	Hypercalcemia, postmenopausal osteoporosis	insomnia, anxiety, agitation, dizziness ,alopecia
10.	FENOFIBRATE	AMNEAL	hypercholesterolemia and hypertriglyceridemia	dizziness, pulmonary embolism, dyspepsia, constipation

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 analysed 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.

CONCLUSION

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 disproportionate impact against some races. Future longitudinal studies are warranted to comprehensively assess the causation of these clinical outcomes in this population.

PRODUCT MONOGRAPH OF LEVETIRACETAM

DRUG NAME: LEVETIRACETAM.

CATEGORY: ANTI-EPILEPTIC.

Chemical Properties

- **Chemical Name**: (S)-2-(2-oxo-1-pyrrolidinyl) butanamide
- **Molecular Formula**: $C_6H_9NO_2$
- **Molecular Weight**: 170.14 g/mol
- **Solubility**: Levetiracetam is soluble in water and ethanol.

Mechanism of Action

Levetiracetam's precise mechanism of action is not fully understood. It is believed to modulate neurotransmitter release through binding to the synaptic vesicle protein SV2A, which plays a role in regulating synaptic transmission. This modulation may contribute to its anticonvulsant effects.

Pharmacokinetics

- **Absorption**: Rapidly absorbed after oral administration, with peak plasma concentrations reached within 1 hour.
- **Distribution**: Widely distributed throughout the body, including the central nervous system.
- **Metabolism**: Metabolized in the liver via hydrolysis, with minimal involvement of the cytochrome P450 system.
- **Elimination**: Excreted primarily unchanged in the urine. Half-life is approximately 7 to 8 hours in adults.

Indications

- **Epilepsy**: Used as monotherapy or adjunctive therapy for partial-onset seizures, primary generalized tonic-clonic seizures, and myoclonic seizures in various forms of epilepsy.
- **Neurological Disorders**: Sometimes used off-label for other neurological conditions, though this is less common.

Dosage and Administration

- **Oral Dosage**:
  - **Adults**: Initial dose is typically 500 mg twice daily, with the dose adjusted based on clinical response and tolerance. The maximum recommended dose is 3,000 mg daily.
  - **Children**: Dosing varies by age and weight. Generally, 10 mg/kg twice daily, up to a maximum of 60 mg/kg/day.
- **Intravenous Dosage**:
  - **Adults**: 500 mg to 1,000 mg twice daily, similar to oral dosing but given as an IV infusion.

Contraindications

- **Hypersensitivity**: Known allergy to Levetiracetam or any of its components.

Warnings and Precautions

- **Neuropsychiatric Effects**: May cause behavioral changes, depression, aggression, or psychosis.
- **Renal Impairment**: Dose adjustment is necessary in patients with significant renal impairment due to altered drug clearance.
- **Suicidal Thoughts**: Risk of suicidal thoughts or behavior is increased in patients taking antiepileptic drugs, including Levetiracetam.

Side Effects

- **Common**: Drowsiness, dizziness, headache, fatigue, and gastrointestinal disturbances (e.g., nausea, vomiting).
- **Serious**: Severe allergic reactions, mood changes, psychotic symptoms, and significant behavioral disturbances.

Drug Interactions

- **Minimal Interactions**: Levetiracetam has fewer drug interactions compared to many other antiepileptic drugs. It does not significantly affect the metabolism of other drugs or is significantly affected by other drugs.
- **Specific Considerations**: Caution is advised when used with other central nervous system depressants or drugs that can affect renal function.

Storage

- **General**: Store at room temperature, away from moisture and heat.
- **Specifics**: Keep tablets and oral solutions in their original containers to protect from light and moisture.

DEPARTMENTAL ACTIVITIES:

St. Peter's Institute of Pharmaceutical Sciences Conducted "Hands on training on vigiflow software, gel electrophoresis".

St. Peter's Institute of Pharmaceutical Sciences Organised Workshop on "Personality and Skill Development By Dr.Jaganath Rao (PhD Parasychology)

St. Peter's Institute of Pharmaceutical Sciences has conducted best out of waste/ painting competitions on 75th Independence day.