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To emerge as one of the premier pharmacy colleges in the country and produce pharmacy professional of global standards.

MISSION

- To deliver quality academic programs in Pharmacy and empower the students to meet industrial standards.
- To build student community with high ethical standards to undertake R&D in thrust areas of national and international standards.
- To extend viable outreach programs for the health care need of the society.
- To develop industry institute interaction and foster entrepreneurial spirit among the graduates.

A PROSPECTIVE STUDY OF PHARMACOLOGICAL MANAGEMENT OF HYPOCALCAEMIA IN PATIENTS AFTER TOTAL THYROIDECTOMY

Manasa K
Pharm D Intern

Background : To assess the pharmacological management of hypocalcaemia in patients undergone total thyroidectomy.

Methodology : It is a prospective observational study undertaken in a tertiary care hospital over a period of 6 months. 50 patients were included in the study after satisfying definite inclusion and exclusion criteria. Serum calcium levels were assessed before and after treatment with calcium supplementation after total thyroidectomy.

Results : Results obtained were tabulated and analyzed. 76% of patients were with hypocalcaemia, in this study females are predominant than males. The incidence of symptomatic hypocalcaemia is 24%. The serum calcium levels improved before and after calcium supplementation.

Treatment regimen :

category 1 : Calcium supplements

category 2 : Calcium supplements, Vit D3 and calcium carbonate

category 3 : Calcium gluconate

Assessement of effectiveness of pharmacotherapy of hypocalcaemia in total thyroidectomy:

The effectiveness pharmacological agents can be assessed after total thyroidectomy by measuring the serum calcium levels before and after treatment with calcium supplements. By measuring the mean difference of calcium levels we can conclude the effectiveness of pharmacological agents

Improvement of Serum Calcium By Various Pharmacological Agents:

		Mean	Mean difference
Cat-1	Before After	8.7 9	0.3
Cat-2	Before After	8.3 8.9	0.6
Cat-3	Before After	7.3 8.9	1.6

Drug effectiveness:

Before supplementation	After supplementation
8.7 mg/dl	9 mg/dl
8.1 mg/dl	8.9 mg/dl
7.3 mg/dl	8.7 mg/dl

Conclusion

Routine administration of oral calcium and vitamin-D were effective in reducing the incidence and severity of hypocalcaemia after total thyroidectomy.

References :

1. Werner, ingbar SH,breverman LE(eds) werners,phikadelphia,lippinott,1986,Historical resume.in:the thyroid a fundamental and clinical text 5th edition 3-6.
2. Ganong WF.the thyroid gland in :review of medical physiology.(2005) 22 nd edition.
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APREPITANT, A NOVEL NEUROKININ-1 RECEPTOR ANTAGONIST IN THE MANAGEMENT OF CHEMOTHERAPY INDUCES NAUSEA VOMITING (CINV) IN CANCER PATIENTS

Dr Robin George, Dr E Sunil Kumar

Background:

Nausea and emesis are two major concerns for patients undergoing chemotherapy for cancer. The 5HT3 receptor antagonist ondansetron is the major factor for preventing and treatment for CINV either alone or often is combination with dexamethasone. Even these treatment options exist, CINV remind as major adverse event for all chemotherapeutic agents. The adverse events have major impact on patient's quality of life and compliance with treatment.

Aprepitant, a novel neurokinin-1 (NK-1) antagonist has been introduced as a new class of drug to prevent CINV. Many trials and studies reveal that comparison of aprepitant to the standard ondansetron and dexamethasone is superior in protecting against CINV. Here this study evaluate and reveals the use and benefits of aprepitant in the management of CINV.

Classification of CINV (Chemotherapy induced nausea and vomiting

Types of CINV	Description
Acute	Nausea and/or vomiting occurring within 24 hours of chemotherapy administration.
Delayed	Nausea and/or vomiting occurring at least 24 hours post chemotherapy administration; often peaks between 48 and 72 hours.
Breakthrough	Nausea and/or vomiting that occur within 5 days post chemotherapy despite optimal antiemetic c regimen used; requires rescue therapy with other antiemetics.
Refractory	Nausea and/or vomiting that occur in subsequent chemotherapy cycles despite maximum antiemetic protocol.
Anticipatory	Nausea and/or vomiting that are triggered by sensory stimuli associated with chemotherapy administration.

Treatment guidelines for CINV

Emetic risk	Treatment regimen
High	**Day 1:** NK1 antagonist + $5HT_3$ antagonist + Dexamethasone **Day 2-3:** NK1 antagonist (if using Aprepitant) + dexamethasone **Day 4:** Dexamethasone
Moderate	**Day 1:** $5HT_3$ antagonist (palonosetron preffered) + dexamethasone ±NK1 antagonist **Day 2-4:** $5HT_3$ antagonist (if did not use palonosetron preffered) or dexamethasone or Aprepitant + dexamethasone ± $5HT_3$ antagonist. If Aprepitant used on day 1, days 2-3 aprepitant ±dexamethasone on days 2-4 ± lorazepam
	Metoclopramide, dexamethasomne, or prochlorperazine ± lorazepam.
Minimal	No routine prophylaxis.

REFERENCES

1. Hesketh PJ (2008) Chemotherapy-induced nausea and vomiting. N Engl J Med 358:2482–2494
2. Berger MJ, Ettinger DS, Aston J, Barbour S, Bergsbaken J, Bierman PJ, Brandt D, Dolan DE, Ellis G, Kim EJ et al (2017) NCCN Guidelines Insights: Antiemesis, Version 2.2017. J Natl Compr Canc Netw 15:883–893

CONCLUSION:

Anti emetic treatment guidelines have indicated that 5HT3 receptor antagonists effectively prevent and control CINV during the acute phase in patients receiving chemotherapy. However, they are less effective in preventing CINV in the delayed phase. Aprepitant is a potent and selective neurokinin 1 receptor antagonist that has been effective against CINV in both acute and delayed phase when added to a standard antiemetic regimen (a 5HT3 receptor antagonist and dexamethasone) in patients receiving chemotherapy. The NK-1 receptor antagonist aprepitant has been shown to markedly improve control of delayed emesis after both highly and moderately emetogenic chemotherapy. Of interest, aprepitant also improves control of acute emesis when used in combination with a serotonin antagonist and a corticosteroid.

Drug Profile
Voxelotor for the Treatment of Sickle-cell Disease

Dr Arya Alocious

Approved Date : November 25, 2019
Brand Name : Oxbryta
Generic name : Voxelotor
Class : Hemoglobin oxygen-affinity modulators
Manufacturing Company : Global Blood Therapeutics, Inc.
Dosage Form : Tablets
Molecular Formula : C19H19N3O3
Molecular Weight : 337.4 g/mol
Storage: Refrigerate at or below 30°C (86°F), along with a desiccant to keep medicine dry and protect it from moisture.

Dosage : Tablets
- Adult : 500 mg.
- >= 12yrs : 1500 mg PO QID.
- <12yrs : not recommended.

Indications: To treat sickle-cell disease in adults and children 12 yrs of age and above.

Mechanism of action: Hemoglobin S (HbS) polymerization inhibitor that binds to HbS with a 1:1 stotiometry and exhibits preferential partitioning to RBCs. By increasing the affinity of Hb for oxygen, it demonstrates dose-dependent inhibiton of HbS polymerization.

Pharmacokinetics:
Absorption: Peak plasma time & whole **blood time :** 2 hrs.
Peak concentration (plasma): 12.6 mcg/mL
Distribution: protein binding : 99.8%
Vd: Central compartment : 338 L
Perpheral compartment : 72.2 L
Metabolism: Extensively metabolized through phase I (oxidation & reduction), phase II (glucoronidation) & combination of phase I & phase II.
Elimination: Half-life: 35.5 hrs
Excretion : feces- 62.6%; urine- 35.5%

Adverse Drug Reaction:
Headache (26%), Diarrhea (20%), Abdominal pain (19%), Nausea (17%), Rash (14%), Pyrexia (12%), Hypersensitivity (<10%), Serious hypersensitivity (<1%)

Contraindications:
Hypersensitivity (eg: generalized rash, urticaria, mild shortness of breath, mild facial swelling, eosinophilia)

Pregnancy and Lactation:
Not to breastfeed during treatment and for at least 2 weeks after the last dose.

Cautions:
- Voxelotor may interfere with laboratory measurements of Hb subtypes (HbA, HbS, HbF) by HPLC.
- Avoid co-administration with strong CYP3A4 inhibitor or fluconazole or decrease the dose to 1000 mg PO QID.
- Avoid co-administration with strong CYP3A4 inducers or increase the dose to 2500 mg PO QID.

Departmental Activities in December- 2019:

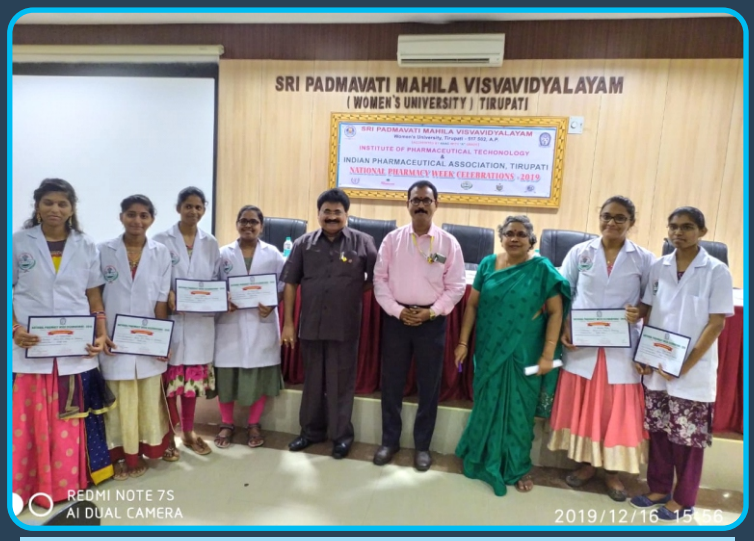
Activities	Patient Counselling	Drug Information services	Adverse Drug Reactions	Medication Errors
Number	1205	132	05	08

Perfect Clicks

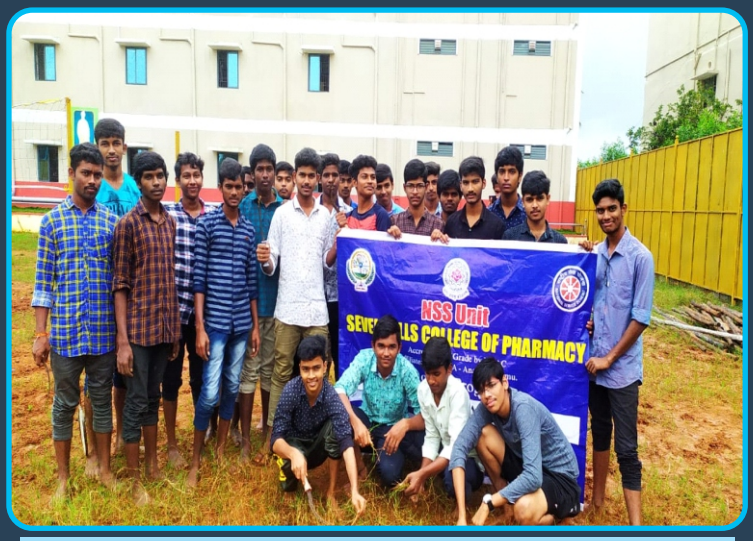
Visit of UGC Expert committee for Autonomous Status

Awareness on Seasonal Diseases

Contentment on DISHA Act



National Pharmacy Week – Bright Idea Competition Winners



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