Shaukat Khanum Memorial Cancer Hospital and Research Centre

Pharmacy Newsletter

Volume XI, Issue # 1, 2021

Issued By:

Drug Information Centre,
Department of Pharmacy, SKMCH & RC

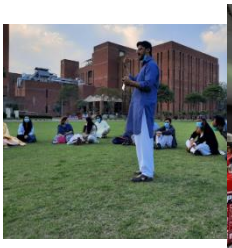
P&TC Updates:

Following drugs are approved by Pharmacy & Therapeutics Committee (P&TC) during 2021 SKMCH&RC:

1. **Chlorhexidine Topical Solution (4%)** – as regular formulary item
2. **Chlorhexidine Gel 2%** - Restricted by services (Dental Clinic Only)
3. **Topical Benzocaine Gel 20%** - Restricted by services (Dental Clinic Only)
4. **Adenovirus Vaccine (COVID -19)** – as regular formulary item

Joint Commission International (JCI) – Reaccreditation

Congratulations! SKMCH & RC Lahore is delighted to announce that the Joint Commission International (JCI) has once again accredited SKMCH & RC Lahore. A team of expert surveyors from the JCI evaluated the compliance to hospital standards through a comprehensive re-accreditation survey that was held from 15th to 19th March, 2021. Just as the other areas surveyed, the medication management system was successfully reviewed and appraised on the 2nd day of the survey. Of note is the fact that Lahore site was surveyed against new and far more stringent standards set by the JCI in its 7th edition of standards. The continuous untiring efforts and commitments of the entire staff are commendable particularly during the pandemic.




New Approvals:

Cabotegravir & Rilpivirine

First Extended-Release Injectable for Adults Living With HIV

With the advent of unprecedented advancements in medicine, AIDS, which was once declared as a death sentence, has become manageable through antiretroviral therapy (ART) and now might even, be curable. On January 21st 2021, the U.S. Food and Drug Administration (FDA) approved Cabenuva™ (cabotegravir and rilpivirine, extended release injectable formulation) as a complete regimen administered once a month for the treatment of HIV-1 infection in adults who are virologically suppressed on a stable antiretroviral regimen. Cabotegravir tablet dosage form Vocabria™ and oral rilpivirine (Edurant™), were also approved by FDA to be taken for one month prior to starting treatment with Cabenuva™ to ensure tolerability before switching to extended release intravenous formulation.

Two, randomized, open-label, controlled clinical trials assessed safety and efficacy of Cabenuva™ in 1,182 HIV-infected virologically suppressed (HIV-1 RNA less than 50 copies/milliliter) adults, before initiation of treatment. At the completion of both studies, patients continued to show virologic suppression, with no observation of clinically relevant change from baseline in CD4+ cell counts.

Injection site reactions, fever (pyrexia), fatigue, headache, musculoskeletal pain, nausea, sleep disorders, dizziness and rash, were the most common adverse reactions with Cabenuva™. It should not be used in patients, known to have a previous hypersensitivity reaction to cabotegravir or rilpivirine, or not virally suppressed (HIV-1 RNA greater than 50 copies/millilitre).

Ref: *https://www.fda.gov/news-events/press-announcements/fda-approves-first-extended-release-injectable-drug-regimen-adults-living-hiv*

Emergency Use Authorization by DRAP to COVID-19 Vaccines

After a thorough review of vaccine results submitted by National Institute of Health (NIH), Drug Regulatory of Pakistan (DRAP) authorized emergency use of Chinese Sinopharm's™ anti-corona virus vaccine, on January 18, 2021.

After this authorization not only federal and provincial but also the private sector will be allowed to import vaccine from China. Federal government has already set aside $150 million to procure vaccine late last year.

The phase-III trial results displayed 79% effectiveness, said Sinopharm on December 30, 2020. However, the interim results may vary in different populations. This vaccine has also been issued emergency use authorization in China, UAE, Jordan, Egypt, Bahrain and Serbia.

It is the second Covid-19 vaccine approved for emergency use in Pakistan. On January 15, 2021, DRAP has also issued emergency use authorization to AstraZeneca-Oxford™ vaccine. In addition to it, interim analysis of phase-III clinical trials of China's Cansino™ Bio Covid-19 vaccine (Ad5-nCoV) which showed that it was 74.8% effective against the virus in Pakistan, has led to approval by DRAP on February 12, 2021.

Ref: https://www.thenews.com.pk/print/776571-pakistan-approves-sinopharm-corona-vaccine-for-emergency-use

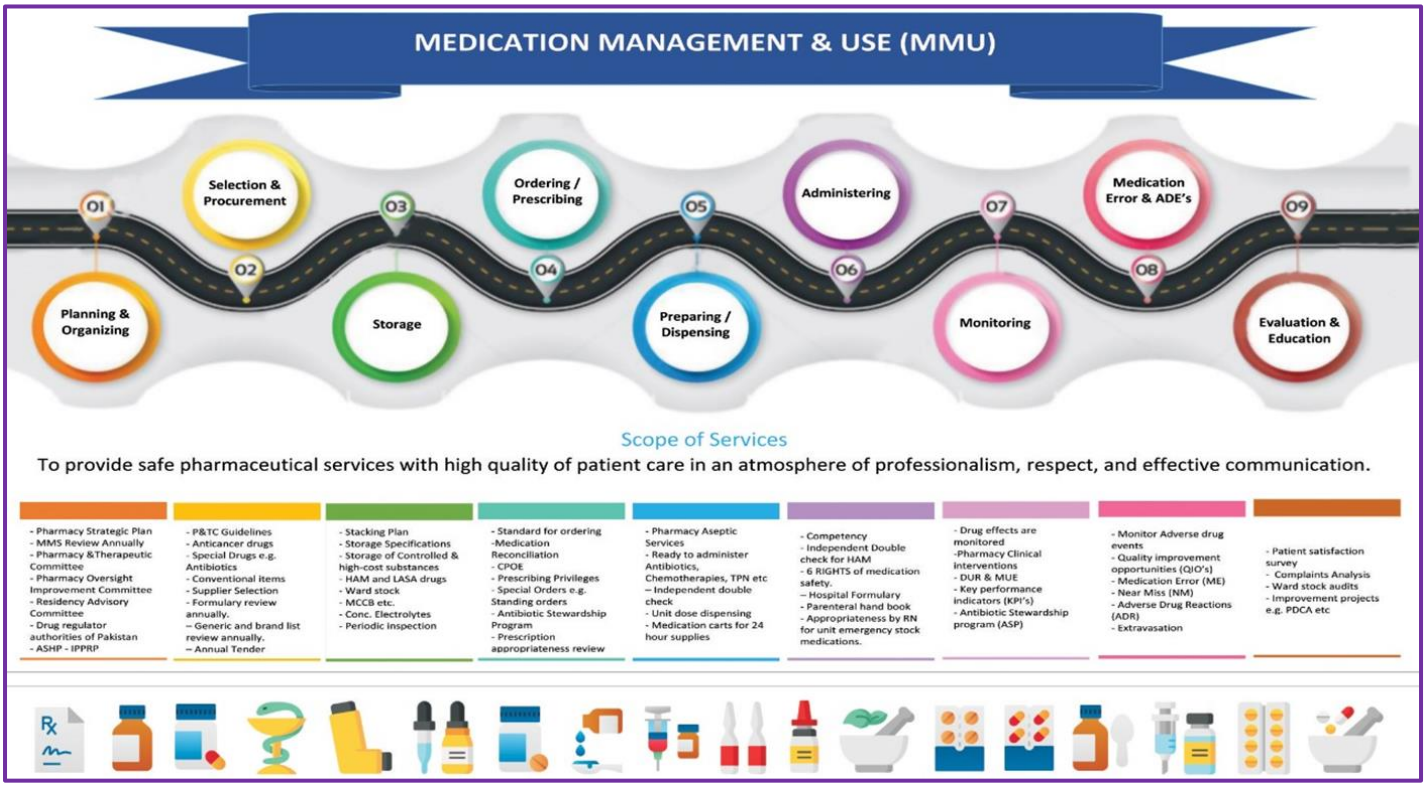
Sputnik V: The Russian Anti-COVID-19 Vaccine in Pakistan

Gam-COVID-Vac (Sputnik) was developed in Russia, where its phase I, II & III studies on vaccine's safety & immunogenicity and safety & efficacy were carried out, respectively. In phase I & II studies, two open, non-randomized trials where conducted. In phase III study, a randomized, double blind, placebo-controlled trial was completed. The two components, in vaccine, a recombinant adenovirus type 26 (rAd 26) vector and a recombinant adenovirus type 5 (rAd 5) vector, carry the gene for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) spike glycoprotein. Phase I & II were carried out between Jun 18 and Aug 3, 2020, and enrolled 76 participants to the two studies (38 in each study). In each study, nine volunteers received rAd26-S in phase 1, nine received rAd5-S in phase 1, and 20 received rAd26-S and rAd5-S in phase 2. This study outcome presented a good safety profile and induced strong humoral and cellular immune responses in participants. Phase III trial was carried out between Sept 7 and Nov 24, 2020, which included 21,977 adults, who were randomly assigned to the vaccine group (n=16501) or the placebo group (n=5476), 3:1 ratio. 19866 received two doses of vaccine or placebo and were included in the primary outcome analysis which was the proportion of participants with COVID-19 confirmed by PCR from day 21 after receiving the first dose. From 21 days after the first dose of vaccine (the day of 2nd dose), 16 (0·1%) of 14,964 participants in the vaccine group and 62 (1·3%) of 4902 in the placebo group were confirmed to have COVID-19; vaccine efficacy was 91·6% (95% CI 85·6–95·2). The vaccine was well tolerated in the studies and no death was associated due to the use of vaccine.

Ref: **1)** Logunov, D. Y., Dolzhikova, I. V., Zubkova, O. V., Tukhvatullin, A. I., Shcheblyakov, D. V., Dzharullaeva, A. S., ... & Gintsburg, A. L. (2020). Safety and immunogenicity of an rAd26 and rAd5 vector-based heterologous prime-boost COVID-19 vaccine in two formulations: two open, non-randomised phase 1/2 studies from Russia. The Lancet, 396(10255), 887-897. **2)** Logunov, D. Y., Dolzhikova, I. V., Shcheblyakov, D. V., Tukhvatulin, A. I., Zubkova, O. V., Dzharullaeva, A. S., ... & Gam-COVID-Vac Vaccine Trial Group. (2021). Safety and efficacy of an rAd26 and rAd5 vector-based heterologous prime-boost COVID-19 vaccine: an interim analysis of a randomised controlled phase 3 trial in Russia. The Lancet, 397(10275), 671-681

ASHP – IPPRP

The department of pharmaceutical services SKMCH & RC is looking forward to enhance and upgrade the American society of health system pharmacist (ASHP) accredited International Pharmacy Practice Residency Program (IPPRP) at both Lahore and Peshawar centres. The Lahore site is already running year I program successfully and further planning to expand it for year II. Since residency program is functional at SKMCH & RC Peshawar too, therefore, Peshawar team is planning to apply for ASHP accreditation of its residency program. This will definitely, not only provide an opportunity to improve clinical pharmacy services in Pakistan, but, also raise the standards of advance pharmacy practice in the region.



Policy updates:

Infectious Disease Updated Pathways in HIS

Infectious disease (ID) team of SKMCH & RC has updated ID part of HIS based therapeutic guidelines (T. Guidelines). The newly updated pathways in the list, address the following:

- Pneumonia
- Skin Soft Tissue Infections
- Surgical Antibiotics Prophylaxis Guidelines
- Urinary Tract Infections

ISMP Gaps as Futuristic Goals of 2021

The purpose of ISMP targeted medication safety best practices for hospitals is to identify, inspire, and mobilize widespread, national adoption of consensus-based best practices for specific medication safety issues that continue to cause fatal and harmful errors in patients, despite repeated warnings in ISMP publications.
Pharmacy SKMCH & RC annual analysis of ISMP guidelines 2018 - 2019 highlighted some gaps. Through strategic efforts, these gaps were met successfully. Followings is the description.

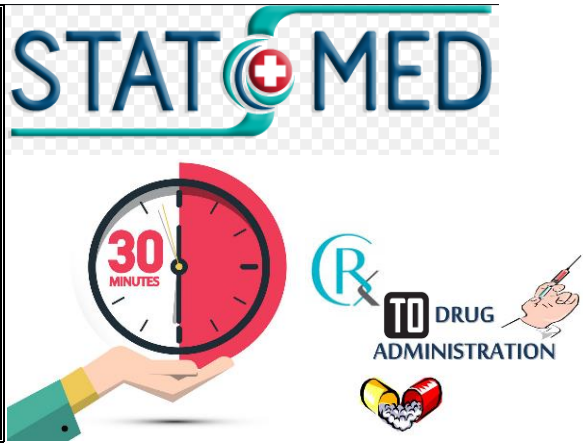
ISMP Gap Analysis 2018 - 2019		
ISMP Recommendation	**Rationale**	**Status**
Vinca alkaloids should be dispensed in minibags	To prevent inappropriate administration	Completed
Education for all oral methotrexate orders.	Reduction of errors	Completed
Antidotes, reversal and rescue agents should be accessible, have standardized protocols and directions for use/administration readily available in all clinical areas.	Eliminate the risk of any delay or inappropriate administration.	Completed

For the year 2020 - 2021, following are the highlights of gap analysis set as futuristic goal.

ISMP Gap Analysis 2020 - 2021		
ISMP Recommendation	**Rationale**	**Status**
Programmable infusion pump	Reduce patient harm by minimizing infusion related medication errors.	In Process
Oral liquid medications not commercially available in unit dose packaging to be dispensed in an oral syringe or an enteral syringe by the pharmacy.	To prevent unintended administration of oral medications via IV route.	In Process

Standard Medication Administration Time

Frequency	Description
Bedtime	Every day at bedtime [2200 h]
Q24	Every day at 1000h
bid/ q12h	Twice daily [1000 and 2200h]
tid	Three times daily [0600, 1400, and 2200 h]
tid with meals	Three times a day with meals
qid	Four times daily [0600,1200,1800, and 2400 h]
q8h	Every day at 0600,1400, and 2200 h.
q6h	Every day at 0600,1200,1800, and 2400 h
q4h	Every day at 0600, 1000,1400, 1800, 2200, 0200 h
q3h	Every three hours from the initial or previous dose
q2h	Every two hours from the initial or previous dose
q1h	Every 1 hour from the initial or previous dose
Q1/52	Every seven days at 0600 h



A dose is considered on schedule if administered / initiated one hour before to one hour after scheduled standard time.

Methicillin Resistant Staphylococcus Aureus (MRSA) Decolonization protocol

Considering increase in number of MRSA infections, department of pharmacy SKMCH & RC in collaboration with Infection Control team has formulated MRSA decolonization protocol for patients undergoing high-risk surgeries and those with recurrent MRSA infections (carriers). The protocol consists of chlorhexidine gluconate (CHG) 4% solution for bath and povidone iodine 10% for intra nasal application. In this 5-day protocol, patient is educated for daily bath with CHG 4% and twice-daily application of povidone iodine 10% in both nostrils. Pharmacy has developed a patient education leaflet, which is handed over to patient at the time of onsite education to maximize compliance. This addition shall help in reducing the risk of surgical site infections due to MRSA.

Spot a Fake N95: A 7 Steps' Game

Counterfeit N95 facemask are on the rise and definitely there is no guarantee they provide the same protection as masks approved by National Institute of Occupational Safety and Health (NIOSH), which regulates filtering face piece respirators.

Recognizing an original N95 respirator can be easy using a few simple steps. Original N95 has the following

1. Approval number preceded by letters TC
2. Labeled model number and possibly a lot number
3. Information about the filter class (letters N, P, or R)
4. Filter efficiency (numbers 95, 99, or 100)
5. NIOSH logo or name of agency in block letters
6. Brand name/registered trademark or abbreviation of business name
7. Headbands. Not ear loops

An N95 mask has N for the filter class and 95 for the filter efficiency, meaning it can filter 95% or more of certain sized particles. ***Ref***: https://www.medscape.com/viewarticle/946132

Wrong Weight Entries: A Hidden Cause of Dosing Errors

Monitoring and documentation of physical parameters of patient like height and weight play a significant role in the optimal course of treatment. Weight based dosing is crucial, especially, in paediatric population of patients, and any inappropriate dose administration based on such wrong entries in patient's charts, may lead to an error. In the past few weeks, pharmacists, at SKMCH & RC, have observed an increase in the wrong weight entries during medication order verifications. The issue has been highlighted and communicated to nursing managers to educate and reinforce staff to be more vigilant during monitoring and documentation. In addition to it, HIS based pop-ups and alerts are to be revised very soon to facilitate any variations and wrong entries.

Recall 2020: Top 10 Medication Errors and Hazards

ISMP shared a list of errors and hazards that have been persistent and can be avoided/minimized with system and practice changes. Two of them are associated with pandemic. All such errors warrant attention and priority in the year 2021. Following is the list of those errors, whereas the details can be find out at https://ismp.org/resources/start-year-right-preventing-these-top-10-medication-errors-and-hazards-2020

1	Prescribing, dispensing, and administering extended-release (ER) opioids to opioid-naïve patients	6	Use of the retrospective, proxy "syringe pull-back" method of verification during pharmacy sterile compounding
2	Not using smart infusion pumps with dose error-reduction systems (DERS) in perioperative settings	7	Combining or manipulating commercially available sterile products outside the pharmacy
3	Errors with oxytocin	8	Medication loss in the tubing when administering small-volume infusions via a primary administration set
4	Hazards associated with positioning infusion pumps outside of COVID-19 patients' rooms	9	Wrong route (intraspinal injection) errors with tranexamic acid
5	Errors with the COVID-19 vaccines	10	Use of error-prone abbreviations, symbols, or dose designations

Publications

1. **Evaluation of Interventional Role of Nerve Block Procedures in Reduction of Opioid Dose among Cancer Patient in Tertiary Care Cancer Hospital in Pakistan**

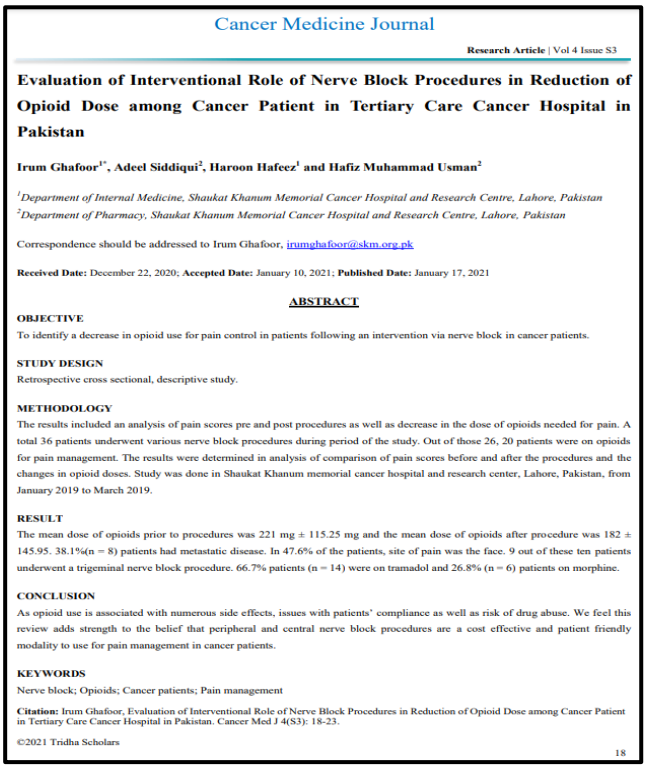
   Contributors: Irum Ghafoor, Adeel Siddiqui, Haroon Hafeez and Hafiz Muhammad Usman

   Journal: Cancer Medicine Journal

2. **Comparative study of oral and IV dexamethasone premedication in the prevention of docetaxel induced allergic reactions**

   Contributors: Wardah Masood, Shoaib Shammas, Zikria Saleem, Omar Akhlaq Bhutta, Izzatullah Khan

   Journal: Journal of Oncology Pharmacy Practice (IF 1.850)



Cancer Medicine Journal

Research Article | Vol 4 Issue S3

Evaluation of Interventional Role of Nerve Block Procedures in Reduction of Opioid Dose among Cancer Patient in Tertiary Care Cancer Hospital in Pakistan

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ABSTRACT

OBJECTIVE
To identify a decrease in opioid use for pain control in patients following an intervention via nerve block in cancer patients.

STUDY DESIGN
Retrospective cross sectional, descriptive study.

METHODOLOGY
The results included an analysis of pain scores pre and post procedures as well as decrease in the dose of opioids needed for pain. A total 36 patients underwent various nerve block procedures during period of the study. Out of those 26, 20 patients were on opioids for pain management. The results were determined in analysis of comparison of pain scores before and after the procedures and the changes in opioid doses. Study was done in Shaukat Khanum memorial cancer hospital and research center, Lahore, Pakistan, from January 2019 to March 2019.

RESULT
The mean dose of opioids prior to procedures was 221 mg ± 115.25 mg and the mean dose of opioids after procedure was 182 ± 145.95. 38.1%(n = 8) patients had metastatic disease. In 47.6% of the patients, site of pain was the face. 9 out of these ten patients underwent a trigeminal nerve block procedure. 66.7% patients (n = 14) were on tramadol and 26.8% (n = 6) patients on morphine.

CONCLUSION
As opioid use is associated with numerous side effects, issues with patients' compliance as well as risk of drug abuse. We feel this review adds strength to the belief that peripheral and central nerve block procedures are a cost effective and patient friendly modality to use for pain management in cancer patients.

KEYWORDS
Nerve block; Opioids; Cancer patients; Pain management

Citation: Irum Ghafoor, Evaluation of Interventional Role of Nerve Block Procedures in Reduction of Opioid Dose among Cancer Patient in Tertiary Care Cancer Hospital in Pakistan. Cancer Med J 4(S3): 18-23.

Comparative study of oral and IV dexamethasone premedication in the prevention of docetaxel induced allergic reactions

Wardah Masood [1], Shoaib Shammas [2], Zikria Saleem [3], Omar Akhlaq Bhutta [2], Izzatullah Khan [2]

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PMID: 33626987 DOI: 10.1177/1078155220984369

Abstract

Background: The hypersensitivity reactions after docetaxel administration is a main concern in this study. The aim of this study is to check the incidence of hypersensitivity reactions (HSRs) after receiving a single dose of intravenous dexamethasone before docetaxel administration.

Method: In this retrospective study, 1 year data from Jan 1st 2018 to Dec 31st 2018 was retrieved from hospital information system (HIS). We examined 210 patients who visited hospital during the last 12 months during their cancer treatment and took dexamethasone orally 3 days prior to docetaxel administration or 20 mg intravenously before 15 minutes of docetaxel.

Results: Out of 210 patients, only 50 patients were taking IV dexamethasone injection prior to docetaxel constitutes only 23.5% while patients who were taking oral dexamethasone were found to be 160 which constitutes 75%. There was no hypersensitivity reaction with oral and IV dexamethasone before docetaxel administration. Majority of the patients were without taking oral dexamethasone before docetaxel administration which not only saved time but also improve patient compliance.

Conclusion: No hypersensitivity reaction had been found either in oral or intravenous dexamethasone prior to docetaxel administration by using patient data from Hospital Information System (HIS). However, intravenous dexamethasone not only improve patient compliance but also reduce the risk of hypersensitivity reactions but the cost of intravenous dexamethasone is higher than the cost of oral dexamethasone. In conclusion, single dose of intravenous IV dexamethasone is preferred treatment option.

Keywords: Dexamethasone; docetaxel; intravenous; orally.

P&TC Update – 1st March 2021

- Annual Review of Medication Management System (MMS)
- HAM and LASA drug list update.
- Annual drug utilization review (DUR)
- HIS drug data update
- Hospital guidelines update in T-guidelines
- Pharmacy KPI(s)

Feedback

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