

A Newsletter on Pharmacy Practice

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Dear reader

Good news is always welcome, but unexpected good news in fight against covid-19 is even sweeter. During this past year as covid-19 held the world hostage, good news has been scarce and usually centered around the development of vaccines – but even this bright spot has been exceedingly frustrating, as countries could not witness much progress in discovering the vaccine. Pharmacists stand in the forefront of this mission and I am proud that the students of the institution have taken a leading role in this regard. Students have been active in providing awareness about the spread of the disease and its prevention. Various social platforms have been creatively used by the students in making the message reach far and wide. Their activities could help the public to understand and follow the instructions.

Kudos to the students and faculty of Pharm D! May the world get rid off the dreadful disease soon and be a better and safe place for living!!



The COVID-19 pandemic and the resulting economic recession has had a devastating effect on people's physical health and created new barriers for people already suffering from mental illness and substance use disorders. India, like other countries, implemented a nationwide lockdown to restrict the transmission of the virus. Earlier this year, researchers looking at the effects of post quarantine on mental health also sought feedback from people with pre-existing mental health issues on their experiences during the pandemic. The team concluded that a significant negative effect is an expected consequence of the various lockdowns that governments have implemented around the world. An online Indian survey has reported that about 40.5% of the participants reported anxiety or depressive symptoms. About three-fourth (74.1%) of the participants reported a moderate level of stress, and 71.7% reported poor well-being. Stress has been invariably associated with precipitation and exacerbation of psychiatric illnesses, and the level of inflammatory cytokines is elevated in these conditions, especially psychosis. It is hypothesized that SARS-CoV-2 infection and the stressors arising out of the illness and its related outcomes

may increase the risk of developing psychiatric illness by disrupting the hypothalamic–pituitary–adrenal axis and causes imbalance in glucocorticoid level (increasing cortisol), which subsequently results in immune dysfunction (increase in the cytokine levels).

Stress can cause the following :

- Feelings of fear, anger, sadness, worry, numbness, or frustration
- Changes in appetite, energy, desires, and interests
- Difficulty concentrating and making decisions and difficulty sleeping or nightmares
- Worsening of chronic health problem and mental health conditions
- Increased use of tobacco, alcohol, and other substances

WHO, together with partners, is providing guidance and advice during the COVID-19 pandemic for health workers, managers of health facilities, people who are looking after children, older adults, people in isolation and members of the public more generally, to help all to look after their mental health.

5 WAYS TO MANAGE STRESS DURING THE CORONAVIRUS OUTBREAK



Looking Ahead

The pandemic has both short- and long-term implications on mental health and substance use, particularly for groups at risk of new or exacerbated mental health disorders and those facing barriers to accessing care. Phased COVID-19 vaccinations are taking place across the country, perhaps signalling that the end of the pandemic is on the horizon. However, many of the stressful conditions employed to mitigate the spread of the coronavirus are likely to persist in the near future, given the slow and troubled rollout of vaccinations across the country, instances of people refusing the vaccine due to fear or uncertainty, and the need for vaccinated people to continue taking existing precautions to mitigate the outbreak.

Source: <https://www.kff.org/coronavirus-covid-19/>



DRUG-INDUCED SKIN PIGMENTATION

Drug-induced skin pigmentation accounts for 10–20% of all cases of acquired hyperpigmentation. Pigmentation may be induced by a wide variety of drugs the main ones implicated include non-steroidal anti-inflammatory drugs (NSAIDs), phenytoin, antimalarials, amiodarone, antipsychotic drugs, cytotoxic drugs, tetracyclines, and heavy metals. Some drugs may cause fixed drug eruption, which is followed by localised hyperpigmentation and gradually fades.

Causes of drug-induced skin pigmentation

Several mechanisms may be involved in the drug-induced changes of pigmentation of the skin.

Certain heavy metals, such as iron, silver, and gold, may be deposited in the dermis following damage to dermal vessels. If deposited in sufficient quantities a distinctive change in skin colour may be seen without any significant increase in melanin.

- Some drugs react with melanin to form a drug-pigment complex. Exposure to sunlight often stimulates sun-induced melanin synthesis forming these complexes.
- Some drugs will induce hyper melanosis (accumulation of melanin) as a non-specific post-inflammatory change in predisposed individuals. This is often worsened by sun exposure.
- Some drugs induce pigmentation directly by accumulating and/or reacting with other substances in the skin.

DRUG/ DRUG GROUP	CLINICAL FEATURES
Tetracyclines (minocycline)	Bluish pigmentation, especially in scars.
Antipsychotics (chlorpromazine and related phenothiazines)	Bluish-grey pigmentation, especially in sun-exposed areas
Phenytoin/ anticonvulsants	10% of patients develop pigmentation of the face and neck resembling melasma.

Treatment for drug-induced skin pigmentation

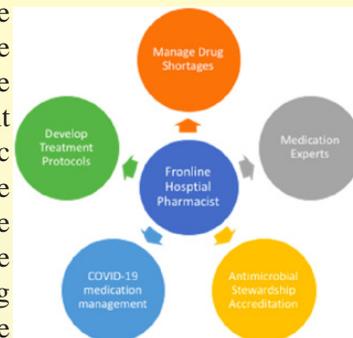
Drug-induced skin pigmentation can become cosmetically disfiguring. In many cases, once the offending drug has been stopped, fading of the lesions occur. However, the pigmentation may last a long time or become permanent. Because many drugs that induce skin pigmentation also cause photosensitivity reactions, where sun protection is usually recommended.

Laser treatment has been successful in treating amiodarone-induced skin pigmentation.

Source : <https://dermnetnz.org/topics/drug-induced-hyperpigmentation/>

ROLE OF PHARMACIST DURING COVID-19

Pharmacists are one of the healthcare professionals on the frontlines who provide pharmaceutical as well as patient centered care during pandemic situation. Various services are provided by the pharmacist like encouraging patient to use mobile to order medicines, delivering medicine at door steps and some innovate services like virtual counselling in managing chronic diseases. Pharmacist plays an important role in the prevention and management of disease.



PREVENTION:

- Educate people about causative and transmission factors, preventive measures of covid-19 (like social distancing, avoiding huge gathers, wearing masks)
- Maintain hygiene (frequent hand wash with soap and water, sanitizing the hands)
- Boosting immunity (taking fresh fruits and vegetables)
- Avoid close contact with COVID patient without any protective measures (like without mask)

TELE HEALTH SERVICES:

Pharmacists can help patients recognize the signs of COVID-19 infection, guide them on how to manage their symptoms, and clarify any information regarding COVID-19. Over the phone, strengthen the communication between physician and pharmacist. Furthermore, telehealth also allows pharmacists to counsel the patient, monitor their health condition, chronic illnesses and to optimize their medications.

IMMUNIZATION:

- Pharmacist plays a role in ensuring the patient to remain up-to-date on immunization., and helps in improving vaccination rate.
- Taking flu shot and vaccinating children helps them to fight against the disease.

CLARIFY MISCONCEPTION AND PROVIDING FACTS ABOUT COVID:

- Providing information about symptoms of COVID, causes and mode of transmission.
- Some misconceptions are about sunlight that it reduces the spread of the virus .
- This misconception should be clarified by communicating with patients through leaflets, video recordings, advertisements on television or social media posts.

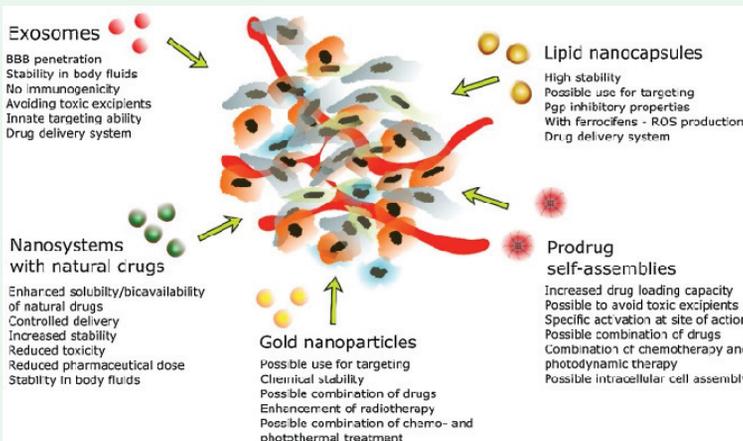
MINOR ALIMENTS CONSULTATION:

To avoid burden on physician, pharmacist can provide treatment as he is well trained in healthcare.

Source : <https://joppp.biomedcentral.com/articles/10.1186/s40545-020-00241-3>

NANOMEDICINE TO TARGET MULTIDRUG RESISTANT TUMORS

Cancer is one of the prominent cause of death worldwide. Conventional cancer treatments rely on chemotherapy, that unfortunately does not display sufficient selectivity for tumor cells and very often causes many severe adverse effects in already debilitated patients. Notably, drug resistance can occur after or even during treatment, and cancer cells can eventually become concurrently resistant not only to the administered therapeutic agent but also to different kinds of unrelated drugs, leading to multidrug resistance (MDR) and consequent therapy failure. The developments in utilizing nanoscale drug constructs in treatment of solid cancers as well as in the potential treatment of multi-drug resistant cancers. Nanomedicine employs a wide range of technologies in healthcare system, to develop innovative applications that exploit the physical, chemical and biological properties of the human body. Nanomedicine includes exosomes, natural compounds,



lipid nano capsules, prodrug self-assemblies, and gold nanoparticles. Nanomedicines are called as nanovesicles as they transport and transfer the required therapeutic dosage form of the drug to the targeted cell, particularly in the case of cancer or inflammatory diseases, and enhance diagnosis. Nanomedicines improve the benefit/risk ratio of the drugs by increasing their bioavailability, selectivity, and efficacy of the target tissue, by reducing the necessary doses and hence decreasing toxicity due to over dosage in the healthy tissues. The adaptability of nanomedicines e.g. modulation of their components, surface functionalization, encapsulation of various active therapeutics as well as the possibility of combining several treatments using a single nanoparticle platform, are characteristics which are perfectly poised to address classical chemo resistance, a major obstacle towards curative cancer therapy. The area of nanomedicine has indeed sparked much attention and holds promise for improved future therapeutics in the treatment of solid cancers. Nanomedical therapeutics can allow for more efficient treatments of resistant cancers, and may well be a cornerstone for RNA based therapeutics in the future, given their general need for shielding from the harsh environment in the blood stream.

MDR Cancer Cells

- Increased drug metabolism
- Decreased drug uptake
- Upregulated efflux pumps
- Drug targets alteration
- Decreased apoptosis
- Increased DNA repair

Source : <https://cdrjournal.com/article/view/3690>

NOVEL DRUG APPROVALS FOR 2020

DRUG NAME	ACTIVE INGREDIENT	APPROVAL DATE	USES
Tabrecta	Capmatinib	06.05.20	To treat patients with non small cell lung cancer
Retevmo	Selpercatinib	08.05.20	To treat lung and thyroid cancers
Uplizna	Inebilizumab	11.06.20	To treat neuromyelitis Optica spectrum disorder
Rukobia	Fostemsavir	02.07.20	To treat HIV
Inqovi	Decitabine and cedazuridine	07.07.20	To treat adult patients with myelodysplastic syndromes
Evrysdi	Risdiplam	07.08.20	To treat partial onset seizures
Sogroya	Somapacitan	28.08.20	Growth hormone

Source : <https://www.fda.gov/drugs/new-drugs-fda-cders-new-molecular-entities-and-new-therapeutic-biological-products/novel-drug-approvals-2020>



VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN



Lockdown Activities

- ❖ Lockdown provided Pharm. D students with an ample opportunity to involve themselves in creating awareness to public through various social media platforms.
- ❖ Covid-19 precautionary measures of social distancing, wearing mask and use of sanitizers have been propagated widely by the students. Immunity Boosting exercises and yoga also has been taken to the door steps of public.
- ❖ Social service initiatives have been taken up by the institution during lockdown. Groceries were distributed to the poor and needy.
- ❖ Students publicized counselling techniques for the divyangjans (deaf and dumb), published videos and displayed posters on Instagram and Facebook.
- ❖ Students presented posters, ppts, videos on the following topics : ● 08-05-2020 - World Ovarian Cancer Day ● 17-05-2020 - World Hypertension Day ● 20-05-2020 - World Auto-Immune and Auto-Inflammatory Arthritis Day ● 21-05-2020 - Osteoporosis Awareness Month – May ● 31-05-2020 - World No Tobacco Day ● 05-06-2020 - World Environment Day ● 08-06-2020 - World Brain Tumor Day ● 14-06-2020 - World Blood Donor Day ● 26-06-2020 - International Day Against Drug Abuse and Illicit Trafficking ● 04-07-2020 - Patient Counseling about life style modifications in Sign Language ● 24-07-2020 - National Seasonal Affective Disorders Awareness Day ● 28-07-2020 - World Hepatitis Day – Hepatitis Free Future ● 29-07-2020 - World ORS Day ● 1st – 7th August 01-08-2020 - World Breast Feeding Awareness Week, ● 11-08-2020 - Immunization awareness

To,

We are pleased to receive your feedback and suggestions to :

The Editorial Board,

A Pharmacy Practice News Letter,

Vijaya Institute of Pharmaceutical Sciences for Women (VIPW),

Enikepadu, Vijayawada - 521 108, Ph: 0866-6460999.

Email: vijayapharmacyfw@gmail.com Website: www.vipw.in