DIRC Newsletter

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Official Desk

Schizophrenia- Pharmacist role

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President
Karnataka State
Pharmacy Council

Schizophrenia is a long-term mental health illness that causes a range of different psychological symptoms. The term 'Schizophrenia' was introduced into the medical language by the Swiss psychiatrist Bleuler.

The exact cause of this mental illness is unknown, but genetics, environment and imbalanced brain chemicals may play a role to cause schizophrenia. Psychosocial factors may also contribute to schizophrenia and is associated with considerable disability which may affect educational and occupational performance.

This illness is usually characterized by withdrawal from reality, illogical patterns of thinking, delusions and hallucinations and accompanied in varying degrees by other emotional, behavioural or intellectual disturbances, mostly in cycles of exacerbation and remission.

According to World Health Organization(WHO), Schizophrenia affects more than 21 million people worldwide but is not as common as many other mental disorders. It is more common among males (12 million), than females (9 million). Schizophrenia typically begins in late adolescence or early adulthood and also commonly starts earlier among men.

Once properly diagnosed, schizophrenia can be effectively managed. With a combination of treatments that may include medication and psychotherapy, many individuals living with schizophrenia are able to participate in daily activities and live productive and meaningful lives.

Treatment offers hope for the future. However, the involvement of family members or care takers in providing support is also very important.

Individuals with schizophrenia often develop co-morbid medical and psychiatric illnesses. The potential for drug-induced disorders and drug–drug interactions is high. Hence, Pharmacists can play a major role in patient education. The ultimate goal of patient education is to increase patient compliance.

In order to effectively improve patient compliance in schizophrenia, pharmacists should be well trained in handling these patients and should have some insight into this condition and the treatment options available for the management of schizophrenia.

Pharmacist can positively improve the patient outcomes by stressing the importance of medication adherence and encourage patients to maintain routine visits with their healthcare provider. He should also discuss other therapeutic options with patients and their physicians, if patients feel that they are not getting the maximum beneficial effect from their current regimen.

Patients or care taker should be reminded not to discontinue any of their medication unless directed by their physician, report any side effects to their health care provider and not to use any other medications like nonprescription or OTC drugs, vitamins and herbal medications, without seeking advice from their health care provider. It also is important for patients to be encouraged to quit use of alcohol and smoking, since this has a direct interaction with the anti-psychotic medications.

Pharmacists can assist patients by showing empathy, providing encouragement and support and remind them that adhering to their therapy is the most effective tool in managing schizophrenia.

Source: 1. http://www.who.int/ 2. http://www.nimh.nih.gov/ 3. http://www.mentalhealthamerica.net/ 4. https://www.nami.org/

CONTENTS

Welcome to New Registrar

Prof. B. G. Shivananda has taken charge as the Registrar of Karnataka State Pharmacy Council, Bengaluru with effect from 3rd September 2016.

Farewell to Sri. Bhagavan P. S.

Sri. Bhagavan P. S. has laid down his office on 31st August 2016.

He has been an associate support for the development of Karnataka State Pharmacy Council, Karnataka Registered Pharmacist Welfare Trust and Drug Information and Research Centre.

The President, Vice-President, members and the staff of Karnataka State Pharmacy Council wish him a happy, healthy and a peaceful retired life.

We all cherish the memory of the time we spent with him in the past 6 years.

New Nominated Members

Government of Karnataka under Notification No.AaKuKa/278/PTD/2015 dated 21-05-2016 have nominated the following fresh panel of persons as nominated members to this Council under Sec.19(b) of the Pharmacy Act 1948, with effect from 21-05-2016.

Sri. D. A. Gundu Rao

Dr. Kishore Singh Chatrapathi

Dr. Jagadish V. Kamath

Dr. Salma Khanam

Sri. Y. Veeranarayana Gowda

The Vice-President, Registrar and Members of the Karnataka State Pharmacy Council congratulate and welcomed the nominated members to the Council.

Nomination to Pharmacy Council of India

The President and Members of the Karnataka State Pharmacy Council (KSPC) unanimously elected **Sri. M.S. Nagaraj** to represent as a nominated member of the state council in the Pharmacy Council of India under Sec. 3(g) of the Pharmacy Act 1948 and senate member to Rajeev Gandhi University of Health Sciences, Bengaluru.

Attention: All Registered Pharmacists

1. Ensure your presence in the work place where you have registered your certificate for Drug License. Please do not lend your Registered Pharmacist Certificate.
2. Work hard with dedication to popularize the 'Pharmacist' professional service among the public.

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Drug of the Quarter

Drug : **Nintedanib**

Class : Respiratory Agent or Tyrosine Kinase Inhibitor

Dosage Form : Capsule

DCGI Approval : 11th March 2016

USFDA Approval : 15th October 2014

Indication : Treats Idiopathic Pulmonary Fibrosis (IPF)

Dose Information

Adult Dosing: 150 mg orally twice daily approximately 12 hours apart. Take with food and swallow capsule whole with water (MAX 300 mg/day)

Paediatric Dosing: Data not available.

Pharmacokinetics

Absorption

- **Tmax:** Oral: 2 to 4 hours
- **Bioavailability:** Oral: 4.7%
- **Effect of food:** Delayed absorption and increased exposure by 20%.

Distribution

- Protein binding, serum albumin: 97.8%
- Vd: 1050 L

Metabolism

- Hepatic: primary route

Excretion

- Renal: Oral, 0.05% (unchanged); IV, 1.4% (unchanged)
- Fecal/Bile: 93.4% changed
- Total body clearance: 1390 mL/min

Elimination Half Life: 9.5 hours

Caution:

- Caution in patients with cardiovascular risk, including coronary artery disease, as arterial thromboembolic events have been reported.
- Increased risk of bleeding; use in patients with known risk of bleeding only if the anticipated benefit outweighs the potential risk.
- Caution in patients with recent abdominal surgery as gastrointestinal perforation has been reported.

Mechanism of Action/Pharmacology:

Nintedanib inhibits multiple receptor tyrosine kinases and non-receptor tyrosine kinases. Nintedanib blocks the intracellular signaling which is crucial for the proliferation, migration and transformation of fibroblasts representing essential mechanisms of the IPF pathology.

Adverse Effects

Common

- **Cardiovascular:** Hypertension
- **Endocrine metabolic:** Decreased weight
- **Gastrointestinal:** Abdominal pain loss of appetite,
- **Neurologic:** Headache

Serious

- **Cardiovascular:** Arterial thromboembolism, myocardial infarction
- **Gastrointestinal:** Diarrhea, gastrointestinal perforation, nausea, vomiting
- **Hematologic:** Bleeding
- **Hepatic:** Increased liver enzymes
- **Respiratory:** Bronchitis, neoplasm of lung, pneumonia

Drug-Drug interactions

Category	Drug/s (Example)	Interaction Effect	Management
Strong CYP3A4 inducers*	Phenytoin, Phenobarbital, Rifampin, Oxcarbazepine, St. John's wort	Decreases nintedanib plasma concentrations.	Avoid concomitant use.
Strong CYP3A4 inhibitors*	Ketoconazole, Posaconazole, Saquinavir, Ritonavir, Indinavir, Nelfinavir, Voriconazole, Lopinavir, Clarithromycin	Increases nintedanib plasma concentrations.	Use caution if concomitant use is required.
Anticoagulants*	Heparin, Warfarin, Tinzaparin, Rivaroxaban, Reviparin, Phenindione, Nadroparin	Additive anticoagulant effects increased risk of bleeding.	Use caution if concomitant use is required.
Drug-Tobacco interactions			
Tobacco		Decreases nintedanib plasma concentrations and loss of efficacy.	Strictly quit smoking before initiating treatment and to avoid smoking throughout treatment.

Severity: *The interaction may be life-threatening and/or require medical intervention to minimize or prevent serious adverse effects.

Effects in Pregnancy and Lactation:

Pregnancy: Study report or clinical data during pregnancy are not available. Nintedanib is not recommended for use in pregnant women.

Breast-feeding: Study report or clinical data on weaning children are not available.

Patient Education

- Please advise the patient to report diarrhea, nausea or vomiting.
- Please counsel the patient to take this drug with food.
- Please advise the patient to quit smoking before initiating treatment and to avoid smoking throughout treatment due to potential for decreased efficacy.
- Encourage patient to report symptoms of gastrointestinal perforation like severe abdominal pain, fever, nausea, vomiting or any unusual bleeding.

References: 1. http://www.micromedexsolutions.com/ 2. http://www.cdsco.nic.in/ 3. http://www.rxlist.com/

Meanings: **Idiopathic Pulmonary Fibrosis (IPF)** - scarring of the lungs with an unknown cause characterized by a progressive decline in lung function, **Tyrosine kinase-** An enzyme that can transfer a phosphate group from adenosine triphosphate to a protein in a cell, **Fibroblast-**a cell in connective tissue which produces collagen and other fibres. ❑

Drug News – Around the Globe

1. Drug: Olaratumab * **Country: USA**

Olaratumab is an antineoplastic drug.

Approved Indications: Olaratumab infusion is approved to use with doxorubicin in adults with certain types of soft tissue sarcoma, which are cancers that develop in muscles, fat, tendons or other soft tissues.

Side-effects: Nausea, fatigue, low levels of white blood cells (neutropenia), musculoskeletal pain, inflammation of the mucous membranes (mucositis), hair loss (alopecia), vomiting, diarrhea,

decreased appetite, abdominal pain, nerve damage (neuropathy) and headache[1].

2. Drug: Daclizumab * **Country: USA**

Daclizumab is an immunological agent.

Approved Indications: Daclizumab is approved for treatment of adults with relapsing forms of multiple sclerosis (MS).Daclizumab is a long-acting injection that is self- administered by the patient monthly.

Dose:150 mg subQ once a month.

Side-effects: Cold symptoms (nasopharyngitis), upper respiratory tract infection, rash, influenza, dermatitis, throat (oropharyngeal) pain, eczema, and enlargement of lymph nodes[1].

3. Drug: Obeticholic acid * **Country: USA**

Obeticholic acid is a semi-synthetic bile acid analogue which belongs to gastrointestinal class of drugs.

Approved Indications: Obeticholic acid is approved for the treatment of primary biliary cholangitis (PBC) in combination with ursodeoxycholic acid (UDCA) in adults with an inadequate response to UDCA, or as a single therapy in adults unable to tolerate UDCA.

Dose: Initial, 5 mg orally once daily.

Side-effects: Severe itching of the skin (pruritus), fatigue, abdominal pain and discomfort, joint pain (arthralgia), pain in the middle part of the throat (oropharyngeal), dizziness and constipation[1].

4. Drug: Atezolizumab* **Country: USA**

Atezolizumab is an antineoplastic drug.

Approved Indications: Atezolizumab infusion is approved to treat the most common type of bladder cancer, called urothelial carcinoma. This is the first product in its class (PD-1/PD-L1 inhibitors) approved to treat this type of cancer.

Side-effects: Fatigue, decreased appetite, nausea, urinary tract infection, fever (pyrexia) and constipation[1].

5. Drug: Pimavanserin* **Country: USA**

Pimavanserin is an atypical antipsychotic drug.

Approved Indications: Pimavanserin tablet is the first drug approved to treat hallucinations and delusions associated with psychosis experienced by some people with Parkinson's disease.

Dose: 34 mg (two 17 mg tablets) orally once daily.

Side-effects: Swelling, usually of the lower limbs.[1].

6. Drug: Lixisenatide* **Country: USA**

Lixisenatide is a glucagon-like peptide-1 (GLP-1) receptor agonist for the treatment of type 2 diabetes.

Approved Indications: Lixisenatide injection is approved as once-daily injection to improve glycemic control (blood sugar levels), along with diet and exercise, in adults with type 2 diabetes.

Side-effects: Nausea, vomiting, headache, diarrhea and dizziness[1].

Reference: www.fda.gov/

Note - *Not available in India

Meanings: **Urothelial carcinoma**- a type of cancer that typically occurs in the urinary system, **Primary biliary cholangitis**-A chronic or long lasting disease that causes the small bile ducts in the liver to become inflamed, damaged and ultimately destroyed. ❑

Safety Alerts

1. Drug: Loperamide-Oral** **Country: USA**

May cause serious heart problems that can lead to death

Loperamide is an antidiarrheal drug used to control the symptoms of diarrhea, including Travelers' Diarrhea.

Alert: The USFDA has warned that this drug can cause serious heart disorders, including abnormal heart rhythms, which can lead to death. This risk may also be increased when high doses of loperamide are taken with several types of medicines that interact with loperamide.

Hence, KSPC-DIRC alerts the healthcare professionals to be cautious while prescribing Loperamide[1].

2. Drug: Ketoconazole-Oral** **Country: USA**

May cause the risk of serious liver damage, adrenal gland disorder and harmful interactions with other medicines

Ketoconazole is an antifungal drug used primarily to treat fungal infections.

Alert: The USFDA has warned to avoid prescribing the antifungal medicine ketoconazole oral tablets to treat skin and nail fungal infections, since it may induce the risk of serious liver damage, adrenal gland disorder and harmful interactions with other medicines that outweigh its benefit in treating these conditions, which are not, approved uses of the drug.

Hence, KSPC-DIRC alerts the healthcare professionals to avoid prescribing Ketoconazole oral tablet as far as possible and to watchout for the said reactions if inevitable[1].

3. Drugs: Fluoroquinolones** **Country: USA**

May increase the risk of disabling side effects involving the tendons, muscles, joints, nerves, and central nervous system

Fluoroquinolones are broad-spectrum antibiotics like ciprofloxacin, levofloxacin, norfloxacin, ofloxacin etc., used for serious bacterial infections.

Alert: The USFDA alerts that fluoroquinolones antibiotics are reported to cause serious disabling and potentially permanent serious side effects involving the tendons, muscles, joints, nerves and central nervous system when used systemically (i.e., tablets, injectables). The serious side effects associated with fluoroquinolones generally outweigh the benefits for patients with acute sinusitis, acute bronchitis and uncomplicated urinary tract infections who have other treatment options.Hence, for patients with these conditions, fluoroquinolones should be reserved for those who do not have alternative treatment options.

Hence, KSPC-DIRC alerts the healthcare professionals to avoid prescribing fluoroquinolone antibiotics as far as possible and to watchout for the said side-effects if inevitable[1].

4. Drug: Canagliflozin** **Country: USA**

May leads to the risk of leg and foot amputations

Sodium- Glucose Co-transporter-2 (SGLT2) inhibitors like Canagliflozin, is an antidiabetic drug used with diet and exercise to lower blood sugar in adults with type 2 diabetes.

Alert: The USFDA issued an alert about an increase in leg and foot amputations, primarily in the toes, in patients treated with the Canagliflozin. The FDA is currently investigating whether canagliflozin use contributes to an increased risk of amputation. Watch the patients for any new tenderness, pain, sores, ulcers or infections on their legs or feet.

Hence, KSPC-DIRC alerts the healthcare professionals to avoid prescribing Canagliflozinas far as possible and to watchout for the said disorders if inevitable[1].

5. Drug: Olanzapine** **Country: USA**

May increase the risk of Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS)

Olanzapine is an antipsychotic medicine used to treat mental health disorders schizophrenia and bipolar disorder.

Alert: The USFDA is warning that Olanzapine can cause a rare but serious skin reaction that can progress to affect other parts of the body and can include fever and swollen lymph nodes and a swollen face. It causes an increase in the number of eosinophils which leads to inflammation. This is called as **Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS)**. This condition can result in injury to organs including the liver, kidneys, lungs, heart or pancreas and can lead to death.

Hence, KSPC-DIRC alerts the healthcare professionals to avoid prescribing Olanzapine as far as possible and to watchout for the said symptoms if inevitable[1].

6. Drug: Aripiprazole** **Country: USA**

May increase the risk of new impulse-control problems associated with mental health

Aripiprazole is an atypical antipsychotic medicine to treat certain mental disorders, including schizophrenia, bipolar disorders etc. It may also be used in combination with antidepressants to treat depression.

Alert: The USFDA alerts that rare but serious impulse-control problems, such as pathological gambling, compulsive eating, compulsive shopping and compulsive sexual behavior have been reported with the use Aripiprazole. These uncontrollable urges were reported to have stopped when the medicine was discontinued or the dose was reduced. These impulse-control problems are rare, but they may result in harm to the patient and others if not recognized.

Hence, KSPC-DIRC alerts the healthcare professionals to be cautious while prescribing Aripiprazole[1].

Reference: www.fda.gov/

Note - **Available in India

Continuing Pharmacy Education (CPE)

Dispensing Instructions to the Pharmacists

Benign Prostatic Hyperplasia-Drug Therapy

Benign Prostatic Hyperplasia (BPH) is a non-cancerous enlargement or growth of the prostate gland in men.

The prostate is part of the male reproductive system. The prostate gland surrounds the urethra, a tube that carries urine from the bladder out of the body. As the prostate gets bigger, it may squeeze or partly block the urethra. This may partially obstruct the flow of urine. This can lead to obstructive symptoms.

The prostate gets bigger (enlarges) gradually after the age of 50 years. By the age of 90 years, about 9 in 10 men have an enlarged prostate. The causes of BPH are not well understood.

Benign prostatic hyperplasia is also known as benign prostatic hypertrophy.

Symptoms

A number of men with BPH do not have many or any symptoms. The men who do have symptoms of BPH usually notice changes to their urination because BPH affects the part of the prostate that surrounds the top part of the urethra.

Lower urinary tract symptoms are a common term used to describe a range of urinary symptoms like obstruction or irritation, but other symptoms may also happen.

Obstructive symptoms include a delay or straining when starting to urinate and slow or dribbling flow of urine. Irritative symptoms include urgent or frequent urination during the day and night.

No treatment is likely to clear all symptoms totally, although symptoms can usually be greatly improved with treatment. The treatments considered usually depend on how severe and bothersome the symptoms are.

Medications : There are different types of oral medications available:

- **Alpha-blockers**- eg. Alfuzosin, Prazosin, Doxazosin, Terazosin, Tamsulosin,
- **5-Alpha Reductase Inhibitors-** eg. Finasteride, Dutasteride

Below is a brief overview of few drugs.

Drugs	Use	Warnings*	Less serious side effects	Advice
Doxazosin	Treats problems with urination caused by benign prostatic hyperplasia (enlarged prostate). Also treats high blood pressure.	Prescription to be reconfirmed in case of patients with a history of liver disease, heart disease, prostate cancer or stomach or bowel problems (such as a blockage).	Edema, nausea, dizziness, headache, fatigue.	Advice the patient to avoid driving vehicle or operate machinery while taking this medicine.
Terazosin	Treatment of benign prostatic hyperplasia and hypertension.	Prescription to be reconfirmed in case of patients with a history of prostate cancer.	Orthostatic hypotension, palpitations, peripheral edema, asthenia, dizziness, headache, somnolence, nasal congestion, rhinitis, sinusitis.	Advise to take this medicine at bedtime to minimize side effects, especially the first dose. Tell patient not to abruptly discontinue drug; since it may cause rebound hypertension. Advise to avoid alcohol. Advice the patient to avoid driving vehicle or operate machinery while taking this medicine.

Drugs	Use	Warnings*	Less serious side effects	Advice
Alfuzosin	Treatment of benign prostatic hyperplasia.	Prescription to be reconfirmed in case of patients with a history of liver disease, kidney disease, QT prolongation, cataract surgery and concomitant use with other alphablockers.	Dizziness, fatigue, upper respiratory tract infection, headache, vertigo, sinusitis.	Advise to take this medicine with food. Advise the patient to take prescribed dose at the same time each day. Advise the patient to notify ophthalmologist of therapy. Drug may increase certain risks with cataract surgery.
Tamsulosin	Treatment of benign prostatic hyperplasia.	Prescription to be reconfirmed in case of patients with a history of kidney disease, liver disease, low blood pressure, prostate cancer or an allergy to sulfa drugs or plan to have cataract or glaucoma surgery.	Infectious disease, backache, asthenia, dizziness, headache, somnolence, insomnia, abnormal ejaculation, rhinitis.	Advise to take this medicine 30 minutes after food. Tell patient not to abruptly discontinue drug without consulting the doctor. Advice the patient to avoid driving vehicle or operate machinery while taking this medicine.
Finasteride	Treats benign prostatic hyperplasia (enlarged prostate). Also treats hair loss in men.	Prescription to be reconfirmed in case of patients with a history of liver disease or severe problems during urinating or prostate cancer.	Abnormal ejaculation, breast tenderness, reduced libido.	Advise the patient to take this medicine with or without meals. Caution the patient to report immediately to the doctor like changes in the breast tissue such as lumps, nipple discharge, pain, enlargement or tenderness. (gynecomastia) Advise patient using drug for hair loss that symptomatic improvement may not occur for 3 months or longer.
Dutasteride	Treatment of benign prostatic hyperplasia in men with an enlarged prostate gland.	Caution in case of liver disease. Pregnant women should avoid touching or handling this medicine.	Disorder of breast like enlargement, tenderness, abnormal prostate specific antigen, ejaculation disorders, erectile dysfunction, reduced libido.	Advise the patient to take this medicine with or without food. Instruct to swallow capsule whole. Do not chew or open capsule as contents may cause oropharyngeal irritation.

Note: * Make sure that the patient has informed the doctor the pregnancy and lactating status.

Store the medicine in a closed container at room temperature, away from heat, moisture and direct light.

Meaning: Orthostatic hypotension- A sudden fall in blood pressure that might occur when a person stands up quickly from the sitting or lying down position.

References:

1. Handbook of Pharma SOS, Educational Series-III, 6th Edition 2014, published by Karnataka State Pharmacy Council, Bangalore.
2. www.micromedexsolutions.com, Micromedex (R) 2.0, 2002-2016, Truven Health Analytics Inc.
3. http://emedicine.medscape.com/

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Drug Usage in Special Population - Pediatrics and Geriatrics

(From our publications)

Cardiovascular System Drugs (oral)

Drug (Oral)	Use in Children (Paediatrics)	Use in Elderly (Geriatric)
Antithrombotic drugs		
Aspirin	Safety and effectiveness have been established.	Dosage adjustment necessary in patients with renal failure.
Isosorbide Dinitrate	Safety and effectiveness in children have not been established.	No dosage adjustment required.
Clopidogrel	Safety and effectiveness in children have not been established.	No dosage adjustment required.
Statins		
Atorvastatin	Safety and effectiveness in children below 10 years of age have not been established.	Contraindicated in active liver disease.
Rosuvastatin	Safety and effectiveness in children have not been established.	No dosage adjustment required.

(to be continued……)

Reference: Drug Usage in special Population-Pediatrics and Geriatrics, Educational Series-II, 6thEdition 2016, published by Karnataka State Pharmacy Council, Bangalore. ❑

Drug Usage in Special Population - Pregnancy and Lactation

(From our publications)

Cardiovascular System Drugs (oral)

Drug (Oral)	Use in Pregnancy (Teratogenicity)	Use in Breastfeeding (Lactation)
Antithrombotic drugs		
Isosorbide Dinitrate	USFDA Category C. Insufficient data to confirm its safety in pregnancy. Use only if the potential benefit outweighs the potential risk to the fetus.	Data not available. Medical advice is necessary.
Clopidogrel	USFDA Category B. Limited data on Clopidogrel during pregnancy. To be used when benefit outweighs risk.	Data not available. Medical advice is necessary.
Statins		
Atorvastatin	USFDA Category X. Contraindicated.	Contraindicated.
Rosuvastatin	USFDA Category X. Contraindicated.	Contraindicated.

(to be continued……)

USFDA Category B: Either animal-reproduction studies have not demonstrated a fetal risk but there are no controlled studies in pregnant women or animal-reproduction studies have shown adverse effect (other than a decrease in fertility) that was not confirmed in controlled studies in women in the first trimester (and there is no evidence of a risk in later trimesters).

USFDA Category C: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans. Drug should be given only if the potential benefit justifies the potential risk to the fetus.

USFDA Category X: Studies in animals or human beings have demonstrated fetal abnormalities or there is evidence of fetal risk based on human experience or both, and the risk of the use of the drug in pregnant women clearly outweighs any possible benefit. The drug is contraindicated in women who are or may become pregnant.

Reference: Drug Usage in special Population-Pregnancy and Lactation, Educational Series-I, 6th Edition 2016, published by Karnataka State Pharmacy Council, Bangalore.

Safety Information

(Jan - June 2016 and Jan - Dec 2015)

Potential Signals of Serious Risks/New Safety Information Identified by the Adverse Event Reporting System (AERS) - USFDA

The USFDA Adverse Event Reporting System (FAERS) is a database that contains information on adverse event and medication error reports submitted to USFDA. The database is designed to support the USFDA's post-marketing safety surveillance program for drug and therapeutic biologic products.

The appearance of a drug on this list does not mean that conclusive of the risk. It means that USFDA has identified a ***potential safety issue***, but does not mean that USFDA has identified a causal relationship between the drug and the listed risk. If after further evaluation the USFDA determines whether the drug is associated with the risk or not and it may take a variety of actions including requiring changes to the labeling of the drug, requiring development of a Risk Evaluation and Mitigation Strategy (REMS) or gathering additional data to better characterize the risk.

Therapeutic Class/ Category	Drug (Examples)	Potential Signal of a Serious Risk / New Safety Information	Additional Information
October-December 2015			
Anti-viral drug	Ledipasvir/Sofosbuvir Simeprevir	Rhabdomyolysis	Evaluation is in progress. **(as of 31st March 2016)**
Anti-convulsant	Levetiracetam	Angioedema, Anaphylaxis	Evaluation is in progress. **(as of 31st March 2016)**
Anti-diabetic	SGLT2 inhibitors: Dapagliflozin, Empagliflozin, Canagliflozin	Acute kidney injury	Evaluation is in progress. **(as of 31st March 2016)**
Endocrine-Metabolic Agent	Somatostatin analogs: Octreotide, Pasireotide	Cholecystitis	Evaluation is in progress. **(as of 31st March 2016)**

Therapeutic Class/ Category	Drug (Examples)	Potential Signal of a Serious Risk / New Safety Information	Additional Information
July - September 2015			
Anti-diabetic	Glyburide	Cardiovascular mortality	FDA decided that no action is necessary at this time.
Anti-diabetic	Dipeptidyl peptidase IV (DPP-IV) inhibitor: Linagliptin, Sitagliptin, Saxagliptin	Renal failure	Evaluation is in progress.
Anti-diabetic	Dipeptidyl peptidase IV (DPP-IV) inhibitor: Linagliptin, Sitagliptin, Saxagliptin	Mouth ulcerations and stomatitis	The labeling section of the products was updated to include mouth ulcerations and stomatitis.
Smoking cessation Agent	Nicotine replacement therapy: Nicotine polacrilex gum, Nicotine Polacrilex lozenge, Nicotine patch, Nicotine inhaler, Nicotine spray.	Seizures	The labeling section was updated to include history of seizures. FDA continues to evaluate the need for regulatory action for other nicotine replacement products.
H2 receptor antagonists	Proton pump inhibitors: Rabeprazole, Esomeprazole Lansoprazole, Omeprazole Pantoprazole	Systemic Lupus Erythematosus (SLE)	Evaluation is in progress.
Alpha-Adrenergic Agonist-Decongestant	Pseudoephedrine-containing products (numerous)	Ischemic colitis	FDA decided that no action is necessary at this time.
Anti-diabetic	SGLT2 inhibitors: Dapagliflozin, Empagliflozin, Canagliflozin	Urosepsis	The warnings, precautions and patient counseling information sections of the labeling were updated.
Anti-cancer drug	Pazopanib	Interstitial lung disease (ILD)/pneumonitis	The warnings, precautions and patient counseling information sections of the labeling were updated.
Anticonvulsant	Zonisamide	Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS)	Evaluation is in progress.
April - June 2015			
Calcium supplement, Antacid	Calcium carbonate	Milk-Alkali syndrome (hypercalcemia)	Evaluation is in progress.
Phosphodiesterase inhibitor/ Respiratory Agent	Roflumilast	Gynecomastia	The Post-marketing experience section updated to include gynecomastia.
Anti-hypertensive	Diazoxide	Pulmonary hypertension	The warnings, precautions and adverse reaction sections of the labeling were updated to include pulmonary hypertension.
Anti-diabetic	SGLT2 inhibitors: Dapagliflozin, Empagliflozin, Canagliflozin	Stroke and thromboembolic event	Evaluation is in progress.
NSAID's	Tramadol, Tramadol+ Paracetamol	Respiratory depression	Evaluation is in progress.
Tumor Necrosis Factor (TNF) blockers	Certolizumab, Etanercept, Infliximab	Psychiatric and nervous system disorders	Evaluation is in progress.
January- March 2015			
Anti-viral drug	Ledipasvir/Sofosbuvir Simeprevir, Sofosbuvir	Cardiac arrhythmia, bradycardia	The labeling section of the products was updated to include to include safety information on the occurrence of serious symptomatic bradycardia.

Therapeutic Class/ Category	Drug (Examples)	Potential Signal of a Serious Risk / New Safety Information	Additional Information
Anti angiogenic and immunomodulators	Pomalidomide	Hepatotoxicity	The labeling section of the products was updated to include hepatotoxicity.
		April-June 2016	
Atypical antipsychotic drug	Aripiprazole-containing drug products	Impulse-control disorders	Evaluation is in progress. (as of 4th October 2016)
Antidepressants	Selective serotonin reuptake inhibitors: Citalopram, Escitalopram, Fluoxetine,Fluvoxamine Tricyclic antidepressants: Amitriptyline, Doxepin, Imipramine	Stress cardiomyopathy	Evaluation is in progress. (as of 4th October 2016)
Beta Interferons	Interferon beta-1a, Interferon beta-1b, Peginterferon beta-1a	Drug-induced lupus	Evaluation is in progress. (as of 4th October 2016)
Cardiovascular drug	Ivabradine	Concomitant use of Ivabradine with drugs that slow the heart rate (e.g. beta blockers, clonidine, digoxin, diltiazem, ivabradine, and verapamil) may increase risk of bradycardia.	FDA decided that no action is necessary for Ivabradine at this time based on available information The "Drug Interactions" section of the labeling for other negative chronotropes was updated to include information about bradycardia when ivabradine is used concomitantly.
Anti-diabetic	Dipeptidyl peptidase IV (DPP-IV) inhibitor: Linagliptin, Sitagliptin, Saxagliptin, sitagliptin /metformin	Pemphigoid	Evaluation is in progress. (as of 4th October 2016)
Antihistamine	Diphenhydramine	QT Prolongation	Evaluation is in progress. (as of 4th October 2016)
Antivirals	Daclatasvir, Ledipasvir, Sofosbuvir, Simeprevir	Hepatitis B reactivation	Evaluation is in progress. (as of 4th October 2016)
First and second generation antihistamines	First generation: Chlorpheniramine, Diphenhydramine Second generation: Terfenadine, Loratadine, Cetirizine, Levocetirizine	Seizures	Evaluation is in progress. (as of 4th October 2016)
Fluroquinolone antibiotics	Ciprofloxacin, levofloxacin, ofloxacin	Drug-induced side effects	The "Boxed Warning," and "Warnings and Precautions," sections of the labeling were updated with information about disabling and potentially irreversible serious adverse reactions that have occurred together.
Blood Modifier Agent / Colony Stimulating Factor	Filgrastim	Glomerulonephritis	Evaluation is in progress. (as of 4th October 2016)
Antivirals	Ledipasvir, Sofosbuvir	Drug-Drug Interaction: ledipsavir/sofosbuvir and lopinavir/ritonavir	Evaluation is in progress. (as of 4th October 2016)
HMG-CoA reductase inhibitors	Atorvastatin, Rosuvastatin,	Interstitial lung disease	Evaluation is in progress. (as of 4th October 2016)
Anti-diabetic	Sodium-glucose co-transporter 2 (SGLT2) inhibitors: Canagliflozin, Empagliflozin, Dapagliflozin	Acute pancreatitis	Evaluation is in progress. (as of 4th October 2016)
Anti-fungal	Terbinafine	Thrombotic microangiopathy	Evaluation is in progress. (as of 4th October 2016)

Therapeutic Class/ Category	Drug (Examples)	Potential Signal of a Serious Risk / New Safety Information	Additional Information
Anti-hypertensive	Bosentan	Anaphylaxis Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS)	Evaluation is in progress. (as of 4th October 2016)
Antineoplastic Agent	Bendamustine	Drug Reaction with Eosinophilia and Systematic Symptoms (DRESS)	Evaluation is in progress. (as of 4th October 2016)
Antineoplastic Agent	Bendamustine	Hepatic and hepatobiliary disorders	Evaluation is in progress. (as of 4th October 2016)
Antihistamines	Cetirizine, levocetirizine, hydroxyzine	Acute generalized exanthematous pustulosis (AGEP)	Evaluation is in progress. (as of 4th October 2016)
		Jan-March 2016	
Atypical 3rd generation antipsychotic drug	Aripiprazole containing drug products.	Impulse-control disorders	Evaluation is in progress. (as of 30th June 2016)
Blood Modifier Agent	Ticagrelor	Atrioventricular block (AV block)	Evaluation is in progress. (as of 30th June 2016)
Antifungal	Fluconazole	Adverse pregnancy outcomes	Evaluation is in progress. (as of 30th June 2016)
Local Anesthetic	Bupivacaine	Local Anesthetic Systemic Toxicity (LAST)	Evaluation is in progress. (as of 30th June 2016)
First and second generation antipsychotics	Risperidone, Paliperidone, Quetiapine, Olanzapine, Ziprasidone	Falls that may result in injury	Evaluation is in progress. (as of 30th June 2016)
Anti-diarroheal	Loperamide	Abuse, misuse, and serious cardiac adverse events, including Torsades de Points	Evaluation is in progress. (as of 30th June 2016)
Anti-diabetic	Metformin-containing drug products	Hepatitis	Evaluation is in progress. (as of 30th June 2016)
Antifungal	Posaconazole	Drug interaction between posaconazole and vincristine potentially causing neurotoxicity	Evaluation is in progress. (as of 30th June 2016)
Phosphodiesterase (PDE)-5 inhibitors:	Tadalafil, sildenafil	Skin melanomas	Evaluation is in progress. (as of 30th June 2016)
Anti-anginal drug	Ranolazine	Seizure	Evaluation is in progress. (as of 30th June 2016)
Antineoplastic Drug	Bortezomib	Stevens-Johnson Syndrome and Toxic Epidermal Necrolysis	Evaluation is in progress. (as of 30th June 2016)

Meanings: **Rhabdomyolysis** - A syndrome caused by injury to skeletal muscle and involves leakage of large quantities of potentially toxic intracellular contents into plasma, **Urosepsis** - A sepsis that complicates a urinary tract infection, **Thrombotic microangiopathy** - A pathology that results in thrombosis in capillaries and arterioles, due to an endothelial injury, **Pemphigoid** - A group of rare autoimmune blistering skin diseases, **Acute generalised exanthematous pustulosis (AGEP)**- An uncommon skin eruption characterized by superficial pustules eruption, **Pustules** - Circumscribed collections of white blood cells and serous fluid, **Drug reaction with eosinophilia and systemic symptoms (DRESS syndrome)**- A syndrome, caused by exposure to certain medications, that may cause a rash, fever, inflammation of internal organs, lymphadenopathy and characteristic hematologic abnormalities such as eosinophilia, thrombocytopenia and atypical lymphocytosis, **Toxic epidermal necrolysis (TEN)** - A rare, life-threatening skin condition that is usually caused by a reaction to drugs, **Stevens-Johnson Syndrome** - A life-threatening skin condition, in which cell death causes the epidermis to separate from the dermis, **Systemic lupus erythematosus (SLE)** - An autoimmune disease in which the body's immune system mistakenly attacks healthy tissue. It can affect the skin, joints, kidneys, brain and other organs. **Ischemic colitis-** A medical condition in which inflammation and injury of the large intestine result from inadequate blood supply, **Gynecomastia** - Swelling of the breast tissue in boys or men, caused by an imbalance of the hormones estrogen and testosterone.

Reference: http://www.fda.gov/

ಸ್ಕಿಝೋಫ್ರಿನಿಯಾ Schizophrenia

ಸ್ಕಿಝೋಫ್ರಿನಿಯಾವು ಒಂದು ತೀವ್ರವಾದ ಮಾನಸಿಕ ಸ್ಥಿತಿಯಾಗಿದ್ದು, ಇದು ಅಸ್ವಸ್ಥತೆಯ ಕಲ್ಪನೆಗಳು, ಭಾವನೆಗಳು ಮತ್ತು ಅನುಭವಗಳನ್ನು ಉಂಟುಮಾಡುವುದು. ಉದಾಹರಣೆಗೆ ಸ್ಕಿಝೋಫ್ರಿನಿಯಾ ಹೊಂದಿರುವ ಜನರು ತಾವು ನೈಜತೆಯೊಂದಿಗೆ ಸಂಬಂಧ ಕಳೆದುಕೊಂಡಿದ್ದೇವೆ ಮತ್ತು ಯಾವ ಆಲೋಚನೆಗಳು ಮತ್ತು ಅನುಭವಗಳು ನೈಜವಾಗಿವೆ ಮತ್ತು ನೈಜವಾಗಿಲ್ಲ ಎನ್ನುವುದನ್ನು ತಿಳಿಯದೇ ಇರಬಹುದು.

ಸ್ಕಿಝೋಫ್ರಿನಿಯಾವು ನೂರರಲ್ಲಿ ಒಬ್ಬರಿಗೆ ಕಾಣಿಸಿಕೊಳ್ಳುತ್ತದೆ. ಇದು ಗಂಡಸರಲ್ಲಿ ಹಾಗೂ ಹೆಂಗಸರಲ್ಲಿಯೂ ಕಾಣಿಸಿಕೊಳ್ಳಬಹುದು. ಸಾಮಾನ್ಯವಾಗಿ ಇದು ಕಾಣಿಸಿಕೊಳ್ಳುವ ಸಾಮಾನ್ಯ ವಯಸ್ಸು ಪುರುಷರಲ್ಲಿ 15–25 ಹಾಗೂ ಸ್ತ್ರೀಯರಲ್ಲಿ 25–35 ಆಗಿರುತ್ತದೆ.

ನೈಜ ಕಾರಣ ಏನು ಎನ್ನುವುದು ತಿಳಿದಿಲ್ಲ. ನಮ್ಮ ಮೆದುಳು ಬಿಲಿಯನ್‌ಗಟ್ಟಲೆ ನರದ ಕೋಶಗಳನ್ನು ಹೊಂದಿರುತ್ತದೆ. ಪ್ರತಿಯೊಂದು ನರದಲ್ಲಿಯೂ ಇತರ ನರ ಕೋಶಗಳಿಂದ ಸಂದೇಶ ಪಡೆಯಲು ಹಾಗೂ ಕಳುಹಿಸಲು ವಾಹಕಗಳು ಇರುತ್ತವೆ. ಈ ನರಕೋಶಗಳ ತುದಿಯು ನ್ಯೂರೋಟ್ರಾನ್ಸ್‌ಮೀಟರ್‌ಗಳು ಎನ್ನುವ ಒಂದು ವಿಧದ ರಾಸಾಯನಿಕ ಅಥವಾ ರಾಸಾಯನಿಕ ವಾಹಕಗಳನ್ನು ಬಿಡುಗಡೆ ಮಾಡುತ್ತವೆ. ಈ ನ್ಯೂರೋಟ್ರಾನ್ಸ್‌ಮೀಟರ್‌ಗಳು ಒಂದು ನರ ಕೋಶದಿಂದ ಮತ್ತೊಂದಕ್ಕೆ ಸಂದೇಶಗಳನ್ನು ಒಯ್ಯುತ್ತವೆ. ಸ್ಕಿಝೋಫ್ರಿನಿಯಾ ಹೊಂದಿರುವ ವ್ಯಕ್ತಿಯಲ್ಲಿ ಈ ಸಂದೇಶವಾಹಕ ವ್ಯವಸ್ಥೆ ಸರಿಯಾಗಿ ಕೆಲಸ ಮಾಡುವುದಿಲ್ಲ. ಈ ರೀತಿ ನ್ಯೂರೋಟ್ರಾನ್ಸ್‌ಮೀಟರ್‌ಗಳಲ್ಲಿ ಬದಲಾವಣೆಗಳು ಉಂಟಾಗುವುದು ಏಕೆ ಎನ್ನುವುದು ಸ್ಪಷ್ಟವಾಗಿಲ್ಲ.

ಇತರ ಅಂಶಗಳಲ್ಲಿ ಜೆನೆಟಿಕ್ಸ್ (ಅನುವಂಶೀಯತೆ), ಸಂಭಾವ್ಯ ವೈರಲ್ ಸೋಂಕುಗಳು ಮತ್ತು ರೋಗನಿರೋಧಕ ವ್ಯವಸ್ಥೆಯ ಅಸ್ವಸ್ಥತೆಗಳು ಸೇರಿರುತ್ತವೆ.

ರೋಗಲಕ್ಷಣಗಳು

ಸ್ಕಿಝೋಫ್ರಿನಿಯಾದ ಚಿಹ್ನೆಗಳು ಪ್ರತಿಯೊಬ್ಬರಲ್ಲಿಯೂ ಬೇರೆ ಬೇರೆ ಆಗಿರುತ್ತವೆ. ಅನೇಕ ಜನರಲ್ಲಿ ರೋಗಲಕ್ಷಣಗಳು ಪುನಃ ಕಾಣಿಸಿಕೊಳ್ಳಬಹುದು ಅಥವಾ ದೀರ್ಘಕಾಲದವರೆಗೆ ಹಾಗೆಯೇ ಉಳಿಯಬಹುದು. ಆದರೆ ಕೆಲವು ಜನರಲ್ಲಿ ಕೇವಲ ಒಂದೇ ಒಂದು ರೋಗಲಕ್ಷಣದ ಪ್ರಸಂಗ ಹೊಂದಿದ್ದು ಇದು ಕೆಲವು ವಾರಗಳವರೆಗೆ ಉಳಿಯಬಹುದು.

ಈ ರೋಗದ ಲಕ್ಷಣಗಳೆಂದರೆ ನೈಜವಾಗಿರದ ವಸ್ತುಗಳನ್ನು ನೋಡುವುದು, ಆಲಿಸುವುದು, ವಾಸನೆ ಅಥವಾ ರುಚಿ ನೋಡುವುದು (ಭ್ರಮೆ); ತಪ್ಪು ಕಲ್ಪನೆಗಳು; ಅನಿಸಿಕೆಗಳು ನಡವಳಿಕೆ ಹಾಗೂ ಉತ್ತೇಜನಕ್ಕೆ ಸಂಬಂಧಿಸಿ ಅಸ್ವಸ್ಥ ಆಲೋಚನೆಗಳು ಹಾಗೂ ಸಮಸ್ಯೆಗಳು.

ಇತರೆ ಲಕ್ಷಣಗಳು ಕೆಲವು ಸಂದರ್ಭಗಳಲ್ಲಿ ಸಂಭವಿಸುವುದಾವುದೆಂದರೆ, ನೆನಪಿನ ಸಮಸ್ಯೆ, ಯೋಜಿಸುವುದಕ್ಕೆ ಕಷ್ಟವಾಗುವುದು ಮತ್ತು ಒಬ್ಸೆಸ್ಸಿವ್–ಕಂಪಲ್ಸಿವ್ ರೋಗಲಕ್ಷಣಗಳು.

ಚಿಕಿತ್ಸೆ

ರೋಗಲಕ್ಷಣಗಳನ್ನು ಕಡಿಮೆ ಮಾಡಲು ಮತ್ತು ಇಲ್ಲದಂತೆ ಮಾಡಲು ಚಿಕಿತ್ಸೆಯು ಬಹಳ ಸಹಾಯ ಮಾಡಬಹುದು. ಚಿಕಿತ್ಸೆಯು ಸಾಮಾನ್ಯವಾಗಿ ಔಷಧೋಪಚಾರದ ಸಂಯೋಜನೆ ಹಾಗೂ ಸಮುದಾಯದ ನೆರವನ್ನು ಒಳಗೊಂಡಿರುತ್ತದೆ. ಅತ್ಯುತ್ತಮ ಫಲಿತಾಂಶಕ್ಕೆ ಎರಡೂ ಕೂಡ ಸಾಮಾನ್ಯವಾಗಿ ಅತ್ಯಗತ್ಯವಾಗಿರುತ್ತವೆ.

• ಔಷಧೋಪಚಾರಗಳು

ಕೆಲವು ಔಷಧೋಪಚಾರಗಳು ಮೆದುಳಿನ ರಾಸಾಯನಿಕದ ಸಮತೋಲನವನ್ನು ಪುನಃ ಮರಳಿ ಪಡೆಯಲು ಸಹಾಯ ಮಾಡಬಹುದು. ಇದು ಭ್ರಮೆ ಅಥವಾ ವಿಭ್ರಾಂತಿಯಂತಹ ರೋಗಲಕ್ಷಣಗಳನ್ನು ತಗ್ಗಿಸಲು ಸಹಾಯ ಮಾಡಬಹುದು.

• ಮನೋವೈಜ್ಞಾನಿಕ ಚಿಕಿತ್ಸೆಗಳು

ಮನೋವೈಜ್ಞಾನಿಕ ಚಿಕಿತ್ಸೆಗಳು ಸ್ಕಿಝೋಫ್ರಿನಿಯಾಕ್ಕೆ ಸಂಬಂಧಿಸಿದ ಕೆಲವು ಜೀವನದ ಪರಿಣಾಮಗಳನ್ನು ತಗ್ಗಿಸಲು ಸಹಾಯ ಮಾಡಬಹುದು. ಕುಟುಂಬದವರು ಜೊತೆಗಿರುವುದು ಚಿಕಿತ್ಸೆಯಲ್ಲಿ ಮಹತ್ವದ ಪಾತ್ರ ವಹಿಸುತ್ತದೆ ಮತ್ತು ಮರುಕಳಿಸುವ ಸಾಧ್ಯತೆಯನ್ನು ತಗ್ಗಿಸಲು ಸಹಾಯ ಮಾಡುವುದು ಕಂಡುಬಂದಿದೆ.

• ಆರಂಭಿಕ ಚಿಕಿತ್ಸೆಗಳು

ಮನೋವೈಕಲ್ಯವನ್ನು ಮೊದಲೇ ಚಿಕಿತ್ಸೆ ಮಾಡುವುದು ಭವಿಷ್ಯದ ಪ್ರಸಂಗಗಳನ್ನು ಹಾಗೂ ದೀರ್ಘಕಾಲಿಕ ಬೆಳವಣಿಗೆಯನ್ನು ತಡೆಯಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ. ಮನೋವಿಕಲತೆಯ ಮೊದಲ ಚಿಹ್ನೆಗಳನ್ನು ತೋರಿಸುವ ಯುವಕರಿಗೆ ಇದರ ಲಭ್ಯತೆ ಹೆಚ್ಚಾಗುತ್ತಿದೆ.

• ಸಮುದಾಯ ನೆರವಿನ ಕಾರ್ಯಕ್ರಮಗಳು

ಸಮುದಾಯವು ಸ್ಕಿಝೋಫ್ರಿನಿಯದಿಂದ ಬಳಲುತ್ತಿರುವ ರೋಗಿಯನ್ನು ಅರ್ಥಮಾಡಿಕೊಂಡು, ಸ್ವೀಕರಿಸಿ ಪರಸ್ಪರರ ನೆರವಿನಿಂದ ಸಮುದಾಯದ ಕಾರ್ಯಕ್ರಮಗಳಲ್ಲಿ ನಡೆಯುವ ತರಬೇತಿ, ಶಿಕ್ಷಣ, ಮಾಹಿತಿ, ಆಶ್ರಯ, ಸೂಕ್ತ ಕೆಲಸ, ಮನೋವೈಜ್ಞಾನಿಕ ಪುನರ್ವಸತಿಗಳಲ್ಲಿ ಅವರನ್ನು ಸೇರಿಸಿಕೊಂಡು ಸಹಾಯ ಮಾಡವುದು ಸಮುದಾಯಗಳ ಮುಖ್ಯ ಕರ್ತವ್ಯವಾಗಿರುತ್ತವೆ.

ಸ್ಕಿಝೋಫ್ರಿನಿಯಾಕ್ಕೆ ಯಾವುದೇ ಚಿಕಿತ್ಸೆಯನ್ನು ಕಂಡುಹಿಡಿಯಲಾಗಿಲ್ಲ, ಆದರೆ ಸೂಕ್ತ ಚಿಕಿತ್ಸೆಯ ಮೂಲಕ ಈ ರೋಗ ಹೊಂದಿರುವ ಅನೇಕ ಜನರು ಉತ್ಪಾದಕ ಹಾಗೂ ಸಂತೋಷದಾಯಕ ಜೀವನವನ್ನು ಹೊಂದಬಹುದು.

ಉಲ್ಲೇಖಗಳು:

1. http://www.helpguide.org/
2. http://www.nimh.nih.gov/
3. http://www.mentalhealthamerica.net/conditions/schizophrenia
4. https://www.sane.org/
5. https://faculty.washington.edu/chudler/schiz.html
6. http://www.medicalnewstoday.com/

ಅನುವಾದಕರು:

ಗಣೇಶ ಭಟ್, ಫ್ರೀಲಾನ್ಸ್ ಬರಹಗಾರರು, ಯಲ್ಲಪುರ, ಉತ್ತರ ಕನ್ನಡ. ❑

KSPC News

1. IndianAmericanPharmacist.com

Indian American Pharmacist organization based in California, USA in collaboration with SDS Tuberculosis Research Centre and Rajiv Gandhi Institute of Chest Diseases, Bangalore organised an Opening ceremony of Indian American Pharmacist Clinical Pharmacy Library for Pharmacists & Students in Karnataka at SDS TRC & Rajiv Gandhi Institute of Chest Diseases Auditorium, Bangalore on 20th September 2016.

On behalf of Karnataka State Pharmacy Council, Sri. Gundu Rao D.A., President, Sri. Y Veeranarayana Gowda, Member, KSPC and Sri.Samson P. George, DIRC Pharmacist, DIRC-KSPC attended the function.

Sri. K.B. Koliwad, Hon'ble Speaker, Karnataka Legislative Assembly, Bengaluru and Dr. Sharan Prakash R Patil, Hon'ble Minister for Medical Education was the chief guests. Other dignitaries include Dr. Shashidhar Buggi, Director, Rajiv Gandhi Institute of Chest Diseases, Mr. Basavaraj Banapur, President & CEO, IndianAmericanPharmacist.com, Sri.Desai, President Karnataka State Government Pharmacists Association.

NOTIFICATION

Government of Karnataka has republished Pharmacy Practice Regulation, 2015 in the Karnataka Gazette, Volume 151 on 24th November 2016 vide Notification No.HFW 163 PTD 2016, dated 17th June 2016.

All the Registered Pharmacists have to renew their registration as per Sec.34 of The Pharmacy Act, 1948, irrespective of their registration status (Life Member, LTR fees, fees permanently paid etc.) specifies for the retention of the name on register after the 31st of December of the year subsequent to the year of registration, he/she should renew annually as per the fees prescribed. The renewal fees shall be paid before 1st April of the year to which it relates.

According to Pharmacy Practice Regulations, 2015 for renewal of registration, the pharmacist shall attend minimum 2 refresher courses in pharmacy of minimum one day duration each in a span of 5 years organized by State Pharmacy Council. (Rule-4.2 PPR, 2015).

The Council is in the process of updating the residential, permanent and professional address, adhar card number, mobile number and e-mail of all Registered Pharmacists.

Hence, all the Registered Pharmacists are advised to create their login account on our website www.kspcdic.com and update their profile before 31st December 2016.

APPEAL

Dear HealthCare Professionals,

Karnataka State Pharmacy Council is highly thankful to all professional pharmacists for their support given to DIRC NEWSLETTER. We hope you have found the Newsletter very useful.

But due to exigency of situation, we are constrained to restrict the number of copies of the Newsletter. Henceforth, the Newsletter would be sent only thorough email to the Registered Pharmacist. We regret for this inevitable measure though it is unpalatable.

KSPC OFFICER BEARERS

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Associate Editor : Ms. Usha M. J.

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BOOK–POST

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