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Pharma Tab

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Antipsychotics Guidelines In Young Patients

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Antipsychotics are a group drugs which are used in the treatment of psychosis particularly in schizophrenia and bipolar disorder.These drugs are used for a variety of presentations in active young patients, still limited antipsychotics approved for use in adolescence, and the evidence base for their use in between age group 12-18 is poor.

Antipsychotics are also less well tolerated in young people than in adults. This young appears to have a greater risk of producing adverse effects including extra pyramidal symptoms (EPSEs),

prolactin elevation, sedation, weight gain and metabolic side-effects.[1]

Because of these types of ADR, prescribing anti psychotics to the age group between 12-18 is more difficult

Dosage guidelines for Psychosis& Schizophrenia[1,2]

The episodes of schizophrenia in adolescence is less common when compare to elder patients. Psychotic illness generally takes place during the pre puberty period. The effectiveness of anti psychotics in age group between 12-18 is very low because of their ADR towards the drug therapy.The available data in young patient -onset psychosis is very low. Much data is obtained from adult recommendations. But, the young patients may not respond as like elder patients

DOSAGE GUIDELINES:

Risperidone:

- Not approved for young patient. But it can be the drug of choice in conduct disorder (anti social behavior or emotions)
- Prolactin elevation and increase in body weight are the complications
- Recommended doses for age group between 12-18;

Day 1: 2 mg daily (1-2 divided doses).
Day 2 : increased to 4 mg daily (1-2 divided doses)
General dose range 4-6 mg daily (1-2 divided doses)
Maximum dose is 16mg/day. (Excess dosing significantly produce the risk of EPSE)

Olanzapine

- It cannot be given to young patients and it has not been approved for it
- Sedation, increasing weight and abnormal lipid profile are common.
- Starting dose 5 mg to 10 mg per day
- Adjusted to 5 mg to 20 mg(dose titration)
- After the proper reassessment more than 10 mg of drug will be suggested.
- Maximum 20 mg per day can be given.

Quetiapine

Six weeks treatment with quetiapine there is a dramatic improvement from schizophrenia symptoms particularly these response were reported in the age group between 13-17.After 26 week therapy with quetiapine it starts to produce its adverse effect like lipid dysfunction and endocrine disturbance and increase in blood pressure.

- The initial dose is 25 mg twice a day and increases the dose up to 50 mg in a day based on the tolerability.
- Dose range is 400- 600 mg
- Maximum dose is 750 mg/day

Aripiprazole

Only drug approved for age less than 15 and approved for 12 weeks in case of severe manic episodes in bipolar disorder.

- Initially 1 - 2 mg once daily; increase to 5 mg after 2 days and to 10 mg (target dose) after 2 further days
- Maximum daily dosage is 30 mg; in psychosis efficacy is shown to be no greater at 30 mg/day compared to 10 mg/day.

Amisulpride

Not licensed for use in children and adolescents. Recommended dosing regimen is.

Clozapine

Clozapine is the drug of choice in resistant schizophrenia particularly in age group 16-18. Clozapine treatment in children and adolescents has been demonstrated to improve psychosis, bipolar disorder, treatment refractory schizophrenia and aggression. Clozapine has been shown to be more effective than haloperidol and olanzapine in the treatment of psychosis in children and adolescents. This population may however be more prone to seizures and neutropenia than the adult population. Cardiovascular adverse effects are also documented as being more prevalent in children and adolescents. Orthostatic hypotension (12%) and tachycardia (28%) were commonly reported in one study.

Reference : 1. Correll CU, Carlson HE. Endocrine and metabolic adverse effects if psychotropic medications in children and adolescents. Journal of the American Academy of Child and Adolescent Psychiatry (2006): 45(7); 771-791

2. Abilify Tablets, Orodispersible tablets, Oral Solution [Aripiprazole – Otsuka & Bristol Myers Squibb] (Available from http://www.emc.medicines.org.uk (accessed on 21/07/2016).

Antipsychotic News and Research

➤ K.Shailaja, Assistant Professor, Dept. of Pharmacy Practice

Antipsychotics medications are used to treat the symptoms of mental disorders such as schizophrenia, depression, bipolar disorder (sometimes called manic-depressive illness), anxiety disorders, and attention deficit-hyperactivity disorder (ADHD) [1].

Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) Study[2]

CATIE study is a nationwide clinical trialfunded by NIMH (National Institute of Mental Health)that compares the effectiveness of older"-Conventional" (first available in the 1950s) and newer "Atypical" (available in 1990s)antipsychotic medications used to treat schizophrenia.

Schizophrenia is a long-term mental disorder characterized by hallucinations, delusions, and disordered thinking.The course of schizophrenia is variable, but usually is recurrent and chronic, often causing severe disability. Previous studies have shown that taking antipsychotic medications consistently is far more effective than taking no medicine and that the drugs are necessary to manage the disease.

IMPORTANCE OF CATIE[2]

Various studies were conducted to assess the efficacy and safety of new antipsychotic medications in schizophrenia. Most of the study was conducted by pharmaceutical companies to obtain Food and Drug Administration (FDA) approval to market a new drug. These were usually conducted for shorter duration (4 to 8 weeks), small number of patients, include one or two medications at a time and focused on limited outcomes. By contrast, CATIE compared four of the newer medications to one another, and to an older medication. The efficacy and safety of the drug were assessed for longer period (18 months). CATIE was conducted at many different treatment sites, broadly representative of the real life settings where patients receive their care. More than 1400 participants in the study included those with physical or other mental health problems in addition to schizophrenia. The results from CATIE will be applicable to the wide range of people with schizophrenia in the United States.

GOAL OF CATIE STUDY[2]

- To provide information to guide the everyday treatment of people with schizophrenia.
- To provide guidance for doctors and patients facing the dilemma of choosing which antipsychotic medication to try next if the first antipsychotic medication was not satisfactory.

Phase I CATIE Trial [3,4,5]

Schizophrenia patientsfrom across 57 country at different clinical sites were randomly enrolled based on the study criteria and were assigned to receive one of the newer "atypical" antipsychotic medications: olanzapine (Zyprexa®), quetiapine (Seroquel®), risperidone (Risperdal®), or ziprasidone (Geodon®), or an older "conventional" medication, perphenazine (Trilafon®).Chronic schizophrenic patients and those were in need of antipsychotic treatment were included in the study and the exclusion criteria were the patients with first episode of psychosis, those with treatment-resistant schizophrenia, and those with serious and unstable medical conditions. Out of total participants, three - quarters of the participants discontinued from the study and only one – quarter of the participants were followed for the entire study (18 months) who were satisfied with the treatment and were able to tolerate its side effects.

Phase II CATIE Trial [3,4,5]

Two different treatment pathways were available to the participants who stopped medication for any reason during phase I trial yet wanted to continue with the study.

EFFICACY PATHWAY[5]

This pathway examined the question: if a patient stops taking an "atypical" antipsychotic because it was not effective enough, what are the benefits of clozapine (Clozaril®) versus another "atypical" antipsychotic medication as the next treatment? The efficacy pathway compared clozapine to the other newer atypical antipsychotic medications. Participants who chose this pathway were randomly assigned to receive either clozapine or an atypical antipsychotic (olanzapine, risperidone, or quetiapine) different from the one they took in phase I.

TOLERABILITY PATHWAY[5]

This pathway examined the question: if a person with schizophrenia stops taking an "atypical" antipsychotic because of intolerable side effects, which medication is the next choice? The tolerability pathway compared ziprasidone to the other atypical medications. Participants who choose this pathway were randomly assigned to receive either ziprasidone or an atypical medication different from their phase I medication.

References:

1. http://www.news-medical.net/?tag=/Antipsychotic.
2. http://www.nimh.nih.gov/funding/clinical-research/practical/catie/phase2results.shtml
3. McEvoy JP, Lieberman JA, Stroup TS, Davis SM, Meltzer HY, Rosenheck RA, et al. Effectiveness of Clozapine versus Olanzapine, Quetiapine, and Risperidone in Patients with Chronic Schizophrenia Who Did Not Respond to Prior Atypical Antipsychotic Treatment. Am J Psychiatry 2006;163: 600-610.
4. Stroup TS, Lieberman JA, McEvoy JP, Swartz MS, Davis SM, Rosenheck RA, et al. Effectiveness of Olanzapine, Quetiapine, Risperidone and Ziprasidone in Patients with Chronic Schizophrenia Following Discontinuation of a Previous Atypical Antipsychotic. Am J Psychiatry 2006;163: 611-622.
5. Lieberman, J.A., Stroup, T.S., McEvoy, J.P., Swartz, M.S., Rosenheck, R.A., Perkins, D.O., et al. Effectiveness of Antipsychotic Drugs in Patients with Chronic Schizophrenia. NEJM 2005; 353:1209-1223.

Autism Spectrum Disorders

➤ Dr.Krishna Kumar D, Prof. & Head, and Keren Ann George, III PharmD., Department of Pharmacy Practice

Autism is a neuro-developmental disorder characterized by significant impaired verbal and non verbal communication, and restricted and repetitive behavior. It first appears during infancy stage or childhood, and generally continuous a steady course of remission.

CAUSES OF AUTISM

It is reported that there is a common changes involved at the genetic, cognitive and neural levels for autism's characteristic group of symptoms. Autism has a strong genetic defect background. It is results from spontaneous DNA structural variation of nucleotide sequence; also it is caused other genetic variation such as additions, deletions or inversions in genetic material during meiosis. Some rare genetic variations may lead to autism by disrupting some synaptic pathways, such as those involved with cell adhesion. Exposure to air pollution during pregnancy, especially heavy metals and particulates may increase risk of autism. Environmental factors that exacerbate autism include certain foods, infectious diseases, solvents, alcohol, smoking, vaccines and prenatal stress.[1]

SYMPTOMS

Common symptoms include difficulty with communication, difficulty with social interactions, obsessive interests and repetitive behaviors.[1-3]

They may experience:

- Behavioral: difficult in social interaction,, compulsive behavior, impulsivity, repetitive movements, poor eye contact self-harm, or persistent repetition of words or actions
- Developmental: Learning and speech disability
- Muscular: lack of coordination of muscle movement
- Cognitive: Intense interest in a limited number of problem or situations and paying attention

- Psychological: Unaware about emotions or depression of others
- Speech: Abnormal tone of voice
- Also common: Lack of empathy, anxiety, or sensitivity to sound in children with intellectual disability, autism is associated with aggression, destruction of property, and tantrums.

MANAGEMENT OF AUTISM

The main goals when treating children with autism are to lessen associated deficits and family distress, and to increase quality of life and functional independence.[4]

Special Education

Parents should concurrently use intensive individual special education by an educator familiar with instructing children who have autistic disorder or a related condition.

Speech, Behavioral, Occupational, and Physical Therapies[4]

Therapies that are reported to help some individuals with autism include the following:

- Assisted communication - Using keyboards, letter boards, word boards, and other devices (eg, the Picture Exchange Communication System, with the assistance of a therapist
- Auditory integration training - A procedure in which the individual listens to specially prepared sounds through headphones
- Sensory integration therapy - A treatment for motor and sensory motor problems typically administered by occupational therapists
- Exercise and physical therapy - Exercise is often therapeutic for individuals with autistic disorder; a regular program of activity prescribed by a physical therapist may be helpful.

In addition, social skills training helps some children with autism spectrum disorder, including those with co morbid anxiety disorders.

Pharmacological treatment[4]

- Drugs may be effective in treating associated behavioral problems and co morbid disorders. Antipsychotic agents such as risperidone and aripiprazole provide beneficial effects on challenging and repetitive behaviors in children with autism spectrum disorder. The other class of antipsychotic agent ziprasidone may help to control aggression, irritability, and agitation. Hyperactivity can be improved with usage of methylphenidate therapy. Other category of drugs like Selective serotonin reuptake inhibitors (SSRIs) like fluoxetine, escitalopram, and citalopram are also used in Autism to improve the cognitive functions.

References

1. An JY, Claudianos C.Genetic heterogeneity in autism: From single gene to a pathway perspective. NeurosciBiobehav Rev. 2016 Jun 16; 68:442-453.

2. Frye RE, Rossignol DA. Identification and Treatment of Pathophysiological Comorbidities of Autism Spectrum Disorder to Achieve Optimal Outcomes.Clin Med Insights Pediatr. 2016 Jun 15;10:43-56.

3. Hormozdiari F, Penn O, Borenstein E, Eichler EE.The discovery of integrated gene networks for autism and related disorders.Genome Res. 2015 Jan;25(1):142-54.

4. Brentani H, Paula CS, Bordini D, Rolim D, Sato F, Portolese J, Pacifico MC, McCracken JT. Autism spectrum disorders: an overview on diagnosis and treatment. Rev Bras Psiquiatr. 2013;35 Suppl1:S62-72.

Cognitive Behavior Therapy

➤ K.Bharathi Priya, Assistant Professor, Dept. of Pharmacy Practice

Cognitive Behavior Therapy (CBT) is one of the targeted approaches to treatment of various psychiatric disorders. Cognitive Therapy is a system of psychotherapy that attempts to reduce excessive emotional reactions and self-defeating behavior, by modifying the faulty or erroneous thinking and maladaptive beliefs that underlie these reactions. The application of CBT varies according to the problem being addressed; it is a individualized program that helps in identification of unhelpful thoughts and behaviors and learn or relearn healthier skills and habits. CBT therapies are much more advanced and targets patient specific problem. There are specific types of CBT like

1. Mindfulness Based Cognitive Therapy (MBCT)
2. Acceptance and Commitment Therapy (ACT)
3. Dialectical Behavior Therapy (DBT)
4. Schema Therapy.

In particular, CBT has demonstrated effectiveness with individuals experiencing the following problems:

- Generalized anxiety
- Panic
- Obsessive Compulsive Disorder
- Phobias
- Post-traumatic Stress Disorder
- Depression
- Eating disorders
- Brain Injury
- Somatic Disorders
- Sexual Dysfunction
- Couples/marital problems
- Social Anxiety
- Anger and Stress Management
- Child Anxiety Disorders and Child Depression
- Child behavior problems

Techniques used: Behavior

Relaxation, rehearsing, systemic de-sensitation, anger management, home work assignment, response prevention, modeling, stimulus control, hypnotherapy, habit control, aversion, role play

Techniques used: Cognition

De-catastrophising continuum, letter writing, imaginary techniques, cost benefit analysis of belief, thought stopping, experimentation, self-monitoring and recording, challenging irrational beliefs, cognitive restructuring, coping skills and problem solving skills, reframing the situation

Results of CBT

CBT involves both 'cognitive therapy' and 'behavior therapy'. Cognitive therapy targets on an individual's pattern of thinking and behavior therapy over looks at the associated actions. When combined together 'cognitive therapy' and 'behavior therapy', it is found to be very powerful method to help overcome a wide range of emotional and behavioral problems in children, adolescents and adults. Depending on the problem, CBT may involve both the modalities, and in some cases, only with behavioural therapy or sometimes only with cognitive methods. CBT aims not just to help people overcome the symptoms that they are currently experiencing, but it also aims to teach the person new skills and strategies that they can apply to future problems

Duration of therapy

A typical CBT program could last anywhere between 5 and 20 weeks depending on the problem, In some cases, improvement is seen within few weeks; however, it might take longer if the problem is very entrenched.

CBT Therapist

CBT though sounds to be simple,it requires a skilful therapist. A well trained and experience cognitive behavior therapist can provide CBT. Cognitive behavior therapist should be registered with the professional registration board..

Do not's with the therapist.

Cognitive behavior therapist should never

- Enter into a sexual relationship
- Enter into any other improper dual relationship
- Divulge information
- Force or try to coerce you to engage in a particular type of treatment, such as group therapy.

Reference: https://www.cbaustralia.com.au

Seminars And Workshops

- Ms.Lochana, Ms. Persis Flora and Ms. Bindhu Bhargavi participated in the Summer School on Applied Pharmacokinetics - (SOAP - 2016) from 22 – 26 June, 2016 organized by J.S.S College of Pharmacy, Ooty.
- Two days' national workshop on "Clinical skill development for clinical pharmacist" was conducted on 24th & 25th July 2016 at C.L.Baid Metha College of Pharmacy co-sponsored by TN Dr.M.G.R.Medical University, Chennai. A total of 50 Pharm. D students from all over Tamil Nadu participated. The workshop was awarded with 15 CME credit points as per Tamil Nadu Dr.M.G.R.Medical University, Chennai. The workshop was inaugurated by Dr. Immanuel, Director - Academic, Global Hospital, Chennai. The resource persons for the workshop were Dr.Rajesh V, Dr.Sonal Sekhar M from Manipal Collge of Pharmaceutical Sciences and Dr. Krishna Kumar from our institute.

Recent Advances In Transcranial Magnetic Stimulation
For Managing Major Depressive Disorders

➤ **Lavanya S, Assistant Professor, Department of Pharmacy Practice**

FDA has cleared 4 transcranial magnetic stimulation (TMS) and Electroconvulsive therapy (ECT) devices for treating depression. Therapeutic neuromodulation is that the brain is an electrochemical organ that can be modulated by pharmacotherapy or device-based approaches, or their combination. Electroconvulsive therapy (ECT) is the prototypic device-based neuromodulation approach, and remains one of the most effective treatments for severe depression.

- Transcranial magnetic stimulation (TMS) utilizes intense, localized magnetic fields to alter activity in neural circuits implicated in the Pathophysiology of depression.
- Clinical availability of TMS has grown steadily over the past 8 years as new devices have been approved by the FDA.
- TMS has the potential to avoid safety and tolerability concerns associated with antidepressant pharmacotherapy (weight gain, sexual dysfunction) and electroconvulsive therapy (cognitive deficits).
- The efficacy of TMS for the treatment of resistant depression have confirmed by randomized and sham-controlled acute trials.

ECT has consistently proved to be an effective treatment for major depressive disorder. The usage of ECT has altered over the period; a practice survey predicted that 100,000 patients receive ECT annually.ECT has some limitations, however, including cost, the need for general anesthesia, and cognitive deficits the range from temporary confusion to anterograde and retrograde amnesia, which can carry on for weeks beyond the active treatment.Despite increasing awareness of mental illness, stigma also remains a significant barrier to receiving ECT.

Comparative studies on TMS Vs ECT were done by a recent meta-analysis. Out of the 9 trials, 384 patients were measured clinically appropriate with depression for ECT and were randomized to one or the other treatment. Both modalities produced a significant reduction in baseline Hamilton depression rating scale (HDRS) score, but ECT (15.4 point reduction) was higher to TMS (9.3 point reduction) in the degree of improvement ($P < .01$).Although TMS is considered as alternative treatment in a subgroup of patients when compared to ECT. The factors include patient preference, fear of anesthesia, concern about cognitive deficits and stigma.

ALTERNATIVE TMS APPROACHES

Efforts to improve the clinical effectiveness of TMS for treating depression include several approaches:

Theta burst stimulation (TBS) is a patterned form of TMS pulse delivery that utilizes high and low frequencies in the same stimulus train (e.g., three 50-Hz bursts delivered 5 times a second). Such a pulse sequence can modulate long-term depression and long-term potentiating mecha-nisms that induce plasticity in areas such as the hippocampus.

Magnetic low-field synchronized stimulation is produced by rotating spherical rare-earth magnets that are synchronized to an individual's alpha frequency. The double blind, sham-controlled trial (N=202) conducted for 6-week reports that the purpose to treat population was no difference in outcome between treatment arms. In patients who completed the study according to protocol (120 of 202), however, active treatment was significantly better in decreasing baseline HDRS score ($P < .033$).

Magnetic seizure therapy (MST) is a new approach to treating patients with more severe depression who are resistant to medical therapy.The major aim is to use TMS to induce a seizure, hence attaining the same efficacy as provided by ECT but without the adverse cognitive effects of ECT. Compare to MST, TMS device utilize much higher stimulation settings to produce a seizure and the goal being to avoid direct electrical current to the brain's memory centers.

Reference:

Philip J Janicak, Advances in transcranial magnetic stimulation for managing major depressive disorder, June 2016: Volume 15 (Issue 6): 49-56.

Seminars And Workshops

- Mrs.Lavanya.S, Assistant Professor of Pharmacy Practice participated in AICTE Sponsored Quality Improvement Program On Healthcare – Promotion, Practice and Management 07-19 Mar, 2016, Organized by: Department of Pharmacy Management and Pharmacy Practice, Manipal College of Pharmaceutical Sciences, Manipal University, Manipal.
- Dr.D.Krishna Kumar, Mrs.Shailja. K and Mr.Magimai Upagara Valan attended IACP Module 2016 and the 2nd Convention of the Indian Association of Colleges of Pharmacy held on 2nd and 3rd April, 2016 at Hotel Le Meridian, Coimbatore , Tamil Nadu.
- Dr.D.Krishna Kumar, delivered a invited guest lecture in ISPOR India - AP Regional Chapter on 22, April, 2016.

Psychiatric Medications During Pregnancy and Lactation

➤ Leena Pavitha, Assistant Professor, Dept. of Pharmacy Practice

Psychiatric illness during pregnancy has a higher ratio each year due to which the American College of Obstetricians and Gynecologists has come up with certain guidelines to be followed during pregnancy in patients with mental illness.

- Psychotropic medications used during pregnancy must have higher risk of developing pre-natal and post-natal adverse effects.
- The use of single medications at higher dose is more preferred than the use of multiple medications in treating the patients who are pregnant and lactating.
- These medications should have fewer metabolites, high protein binding property and fewer drug interaction with other medication used during pregnancy.
- Paroxetine must be avoided by pregnant women and women who have plan of becoming pregnant.
- Lithium: congenital cardiac malformation.
- Valproic acid: During pregnancy causes an increased risk of neural tube defects, craniofacial and cerebrovascular anomalies.
- Carbamazepine: Exposure increases the risk of neural tube defect.
- Diazepam: prenatal exposure increases the risk of oral cleft.
- Use of typical anti-psychotics has a larger reproductive safety profile. Doses of typical anti-psychotics must be reduced during the pre-partum period.

FDA category:

A= controlled studies shows no risk, B= no evidence of risk in humans, C= risk cannot be ruled out, D=positive evidence of risk, X= contraindicated in pregnancy

L1=safest, L2=safer, L3=moderately safe, L4= possibly hazardous, L5= contraindicated.

DRUGS	FDA PREGNANCY CATEGORY	LACTATION RISK CATEGORY
ANXIOLYTICS AND HYPNOTICS BENZODEPINES		
ALPRAZOLAM	D	L3
CHLORDIAZEPOXIDE	D	L3
CLONAZEPAM	D	L3
CHLORAZEPAM	D	L3
DIAZEPAM	D	L3,L4
ESTANZOLAM	X	L3
FLURAZEPAM	X	L3
LORAZEPAM	D	L3
OXAZEPAM	D	L3
QUAZEPAM	X	L2
TEMAZEPAM	X	L3
TRIAZOLAM	X	L3
NON-BENZODEPINES:		
BUSPRIONE	B	L3
CHLORHYDRATE	C	L3
ESZOPIDONE	C	NA
ZALEPLON	C	L2
ZOLPIDEM	B	L3
ANTI-EPILEPTICS AND MOOD STABILIZERS:		
CARBAMAZEPINE	D	L2
LAMOTRIGINE	C	L3
LITHIUM	D	L4
VALPROIC ACID	D	L2
ANTI-PSYCHOTICS:		
ARIPIPRAZOLE	C	L3
CHLORPROMAZINE	C	L3
CLOZAPINE	B	L3
FLUPHENAZINE	C	L3
HALOPERIDOL	C	L2
LOXAPINE	C	L4
OLANZAPINE	C	L2
PERPHENAZINE	C	NA
PIMOZIDE	C	L4

DRUGS	FDA PREGNANCY CATEGORY	LACTATION RISK CATEGORY
QUETIAPINE	C	L4
RISPERIDONE	C	L3
THIORIDAZINE	C	L4
THIOTHIXENE	C	L4
TRIFLUOPERAZINE	C	NA
ZIPRASIDONE	C	L4
ANTI-DEPRESSANTS: TRICYCLIC AND HETEROCYCLES		
AMITRIPTYLLINE	C	L2
AMOXAPINE	C	L2
CLOMOPRAMINE	C	L2
DESIPRAMINE	C	L5
DOXEPIN	C	L2
IMIPRAMINE	C	L2
MAPROTILINE	B	L3
NORTRIPTYLLINE	C	L2
PROTRIPTYLLINE	C	NA
SSRI'S:		
CITALOPRAM	C	L3
ESCITALOPRAM	C	L3 in older infants L2 in older infants L3 neonates
FLUOXETINE	C	L2
FLUOXAMINE	C	L2
PAROXETINE	D	L2
SERTARALINE	C	L2
OTHER ANTI-DEPRESSANTS:		
BUPROPION	B	L3
DULOXETINE	C	NA
MIRTAZAPINE	C	L3
NEFAZODONE	C	L4
TRAZODONE	C	L2
VENLAFAXINE	C	L3

Reference: www.aagp.org/ap/2008

Prescribing of Atypical Anti-Psychotics For Schizoprenia

➤ **Kamala R, Assistant Professor, Dept. of Pharmacy Practice**

Schizophrenia is a chronic thought disorder in which characteristic psychotic symptoms are seen during the acute phase of the illness with partial or full resolution of symptoms between psychotic episodes, coupled with deterioration from a previous level of social and occupational functioning. Schizophrenic patients should be given care by a multidisciplinary team providing a better primary and secondary care. Early detection and appropriate treatment can help to improve the health outcomes and reduce the progression of illness. The choice of the anti-psychotic selection depends on the severity and potential risks on the individual patient. Generally anti-psychotics are prescribed at a low possible dose and then titrated to desired level to avoid all unnecessary adverse effects. Both typical and atypical antipsychotics are used in the treatment of schizophrenia. Due to the lower risk of extrapyramidal adverse effect of atypical anti-psychotics over typical anti-psychotics Australian guidelines prefer the atypical anti-psychotics as the first line treatment option for schizophrenia however new challenges arise due to the concern of metabolic adverse effects associated with atypical anti-psychotics. The

safety and efficacy of all atypical anti-psychotic agents are compared only in two double-blind controlled study so far, in the study they compared risperidone and clonazepam for 28 days and revealed that both the drugs were equally effective and also no significant adverse effect was noticed except for increased or excessive salivation. In a larger randomized study the patients were given with olanzepine and risperidone for 28 weeks olanzepine group showed statistically significance over risperidone group and also the potential population showed reduced extra pyramidal side effects. A recent study also concluded that there is no significant cataract problem detected in schizophrenia patient administered with atypical anti-psychotics. Concluding the use of atypical anti-psychotics in schizophrenic patients is to prescribe the drugs under a proper supervision of consultant psychiatrist or appropriate specialists. Also the patients under the treatment of combining both typical and atypical anti-psychotics should be directly monitored by specialist and the details are documented properly. Patients are prescribed with low possible dose with a special concern on elderly patients. Precaution is necessary while prescribing in patients with dementia, prolonged QT interval, and diabetes.

Reference:

1. http://www.bpac.org.nz/BPJ/2011/november/antipsychotics.aspx
2. http://www.bpac.org.nz/BPJ/2011/november/docs/bpj_40_antipsychotics_pages_14-23.pdf
3. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2014208
4. Campbell M, Young PI, Bateman DN, et al. The use of atypical antipsychotics in the management of schizophrenia. Br J ClinPharmacol 1999; 47: 13–22.

Awareness Camps

Cancer awareness programme

A cancer awareness programme was conducted on 04.02.2016 at Government dispensary centre, OMR, Thoraipakkam. Our Pharm.D students actively participated and distributed the pamphlets on awareness of various cancer. In the afternoon session cancer awareness lectures were conducted for the pharmacy student. The oncologists from integrated cancer care group (ICCG), Dr.Rejiv Rajendranath, Senior Consultant Medical Oncologist, Dr.P.Rajkumar and Dr.N.Kathiresan Senior Consultant – surgical oncologists spoke on basic and advanced cancer therapy.

Awareness camp on Hypertension, Diabetes and obesity

An awareness camp on Diabetes, Hypertension and obesity was conducted on 29.01.2016 at V.H.S Hospital. More than 100 patients were checked for their sugar level, blood pressure and BMI. The fourth year Pharm.D students actively participated in the camp

Antipsychotic Drugs And Their Recent Clinical Trial Reports

➤ Bindhu Bhargavi MVN and Aparna N, IV Pharm.D, Department of Pharmacy Practice

S. No	Title Of Study	Condition	Intervention	Phase	Type Of Study
1	InORS - International Observational Registry on Schizophrenia With Injectable Risperidone and Oral Antipsychotics	Schizophrenia	Risperidone Long-Acting injectable or oral antipsychotics	Phase 4	Observational
2	Prodrome-Based Early Intervention with Antipsychotics vs. Benzodiazepines in First-Episode Schizophrenia	Schizophrenia Psychoses	Antipsychotics vs. Lorazepam (Drugs)	Phase 4	Interventional
3	Risperdal Consta for Bipolar Disorder	Bipolar I Disorder	Injectable Risperidone (Consta) or oral antipsychotic	Phase 4	Interventional
4	Molecular Mechanisms of Antipsychotic-induced Insulin Resistance	Adverse Effect of Other Antipsychotics and Neuroleptics Insulin Resistance	Olanzapine placebo	Phase 2	Interventional
5	The Role of miR-30 Family Dysregulation in Response to Antipsychotic Treatment	Schizophrenia	Risperidone, Olanzapine Quetiapine, Aripiprazole Ziprasidone	Phase 1 & 2	Interventional
6	Quetiapine Related Neurochemical Changes as Measured by Magnetic Resonance Spectroscopy in Schizophrenia	Schizophrenia	Quetiapine	Phase 4	Interventional
7	Study of Preladenant for the Treatment of Neuroleptic Induced Akathisia (Study P05145AM1)	Akathisia, Drug-Induced Antipsychotic Agents Movement Disorders	Preladenant Placebo Anticholinergic agents or propanolol	Phase 2	Interventional
8	A Study of RO4917838 in Combination with Antipsychotic Treatment in Patients with Schizophrenia.	Schizophrenia	RO4917838 Placebo Standard antipsychotic therapy	Phase 2	Interventional
9	Study Comparing Adjunctive Risperidone Versus Placebo in Major Depressive Disorder That Is Not Responding to Standard Therapy	Major Depressive Disorder	Risperidone	Phase 3	Interventional
10	Pharmacokinetic Characterization of Intramuscular Olanzapine Depot	Schizophrenia Schizoaffective Disorder	Intramuscular Olanzapine Depot	Phase 1	Interventional

References:https://clinicaltrials.gov/ct2/results?term=antipsychotics&Search=Search

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