The Pharma Innovation

ISSN: 2277- 7695
CODEN Code: PIHNBQ
ZDB-Number: 2663038-2
IC Journal No: 7725

ISSN 2277-7695

Received: 18-10-2012
Accepted: 01-11-2012

Vol. 1 No. 11, Jan 2013
Online Available at: www.thepharmajournal.com

THE PHARMA INNOVATION

# Psychotic Disorders and the use of Antipsychotic Medications: A Review

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The diagnosis of a psychotic disorder has the ability to significantly impact a person's viewpoints, interaction, understanding, and communication with the outside world. It is estimated that about 1% of the world's population has a psychotic disorders with men and women being equally affected. The symptoms of psychotic disorders have the potential to negatively impact every facet of an individual's life, and impair an individual's ability to engage in social, occupational, or academic functions which are generally requirements of daily living. The existence of psychotic disorders such as schizophrenia, schizophreniform, delusional disorders can display negative symptoms, positive symptoms, cognitive disturbances but the advent of first and second generation antipsychotic medications have the ability to alleviate some of these symptoms and enable some suffers to achieve some semblance of normal functioning through maintenance therapy.

*Keyword:* Psychotic Disorders, Negative Symptoms, Schizophrenia, Antipsychotic Medications

**INTRODUCTION:** Psychotic disorders such as schizophrenia are recognized as a group of illnesses that have the ability to affect a person's mind which leads to alterations in a person's ability to think clearly, making rational judgments or decisions, respond emotionally, communicate effectively, understand reality from imagination, and behave appropriately in public (Hersen, Turner, & Beidel, 2007). About 1 % of the worldwide population suffers from a psychotic disorder which has the ability to affect men and women equally (Hahn, Albers, & Reist, 2008). The symptoms of psychotic disorders are severe to the point that they significantly impair a person's ability to engage in normal functioning because it disturbs that ability to stay in touch with reality so they cannot meet the everyday demands or obligations of everyday life but for the most part even the most severe psychotic disorders can be treated. There are three major types of major psychotic disorders (schizophrenia and schizophrenia-like disorders), psychotic mood disorders, and psychosis associated with neurological conditions, but one of the most debilitating and costly of all adult psychiatric disorders is schizophrenia. Schizophrenia is considered to be a psychotic thought disorder that is characterized by a mixture of symptoms that involve perception, cognition, emotions, behavior, attention, concentration, motivation, and judgment (Dipiro et al., 2005). The diagnostic criteria for schizophrenia is based on the Diagnostic and Statistical Manual of Mental Disorder, Fourth Edition, Text Revisions (DSM-IV-TR) which states that two or more active positive and negative symptoms must be present

for 1 month or there must be continuous signs of illness for at least 6 months for an individual to meet the diagnostic criteria (American Psychiatric Association, 2000). Schizophrenia still continuous to be an illness that defies a conclusive explanation from the scientific and research community but major strides have been made with regards to pharmacological agents that are available to treat the major negative and positive symptoms. The negative or deficit symptoms of schizophrenia can include blunted affect, social withdrawal avolition, poverty of speech, or psychomotor retardation (Schatzberg, Cole, DeBattista, 2010). The cognitive symptoms of the symptoms of schizophrenia affect the attention, memory and execuive functions whereas the positive symptoms consist of delusions, hallucinations, agitation, or disorganized speech. While the pathophysiology of the negative symptoms is still knownn, the development of the positive symptoms are thought to be related to a hyperactive dopamine system (Preston & Johnson, 2011). Additionally, mood symptoms can be observed with psychotic disorders where individual can display depression, dysphoria, or hopelessness as a hallmark feature.

Besides schizophrnia, the other psychotic disorders are schizoaffective disorder which portrays both the classical symptoms of schizophrenia but also individuals can suffere from a mood disorder either depression or bipolar disorder (Hersey, Turner, & Beadle, 2007). In order for meet the DSM-IV-TR criteria for schizoaffective disorder the person must meet the criteria for schizophrenia as well as the addition of an affective component of the disease but there must be a two week time period where delusions or hallucinations are present without mood symptoms (American Psychiatric Association, 2000). Schizophreniform is similar in presentation to that of schizophrenia but the symptoms of the disorder last for longer than one month but less than 6 months, and in two-thirds of the cases patients will go on to develop the diagnosis of schizophrenia. Similar to both schizophrenia and schizoaffective disorder there is the observance of social and occupational dysfunction in schizophreniform but this is not required for a diagnosis to be made (Hersen, Turner, & Beidel, 2007). With brief psychotic disorder individuals can present with psychosis for at least one day that last less than 30 days which can develop spontaneously either as a result of a stressful life event. The presence of delusions, hallucinations, and disorganization are generally present with the diagnosis of brief psychotic disorder (Hahn, Albers, & Reist, 2008). Delusional disorder deals with a person experiencing delusions that involve real-life situations that can be true such as having a disease or being followed and this is normally present for at least one month. Lastly, in order for any person to meet the criteria for these psychotic disorders they must not be included by a substance or medical condition but there are occasions where there can be the presence of a substance-induced psychotic disorder or a psychotic disorder due to a medical condition so these must be ruled out during the differential diagnosis (Hersen, Tuner, & Beidel, 2007).

For the most part, the symptoms of psychotic disorders can differ from one person to the other but the symptoms that are most commonly observed are delusions and hallucinations. Currently, the exact cause of psychotic disorders is still not known but it is theorized that it is related to a variety of factors whether genetic, medical, or environmental (Preston & Johnson, 2011). While the origin of psychotic disorders still remains elusive researchers and scientists have been able to develop pharmacotherapy that have been instrumental in targeting the core symptoms of specific psychotic disorders whether they are predominately negative, positive, cognitive, or mood symptoms that disturb a person's ability to led a normal life.

When it comes to relieving the suffering and improvement of quality of life, clinicians, often turn to medication therapy and antipsychotic medications offer this particular advantage (Schiff, Galanter, Duhig, Lodolce, Koronkowski, & Lambert, 2011). Antipsychotic medication are

generally started with the presenting signs of psychosis are observed in an individual so a full-brown psychotic episode can may be avoided if there is an early intervention (Preston & Johnson, 2011). Biomedically, antipsychotics are thought to exert their antipsychtic efffect by reducing dopamine transmission centrally whichis related to the blockage of postsynaptic D2 receptors in the mesoblimic area and possibly the mesocortical ares of the brain (Dipiro et al., 2005). For antipsychotic therapy, consideration has to be given to the side effect profile and neurotransmiters that are specificially target by either the typical (first-generation) or atypical (second-generation) antipsychotics. The typical antipsychotic chlorpromazine was the first antipsychotics to be used and other atypicals such as haloperidol, thiordazine, and perphenazine followed suit but then came the second generation antipsychotics (e.g. clozapine, olanzapine, risperidone, quetipaine, ziprasidone, aripiprazole, and more recently paliperidone, iloperidone, and asenapine) which has a greater serotonin (5HT)/dopamine (DA) ratio compard to the typical antipsychotics (Schatzberg, Cole, DeBattista,2010). The typical antipsychotics are categorized based on either low potency, medium potency, or high potency based on their affinity to the dopamine receptors All antipsychotics generally have five side effect profiles that one needs to be aware of when it comes to their selection and this include, 1)sedation, 2)anticholinergic (ACH), 3) extrapyramidal, 4) weight gain, and 5) metabolic effects (Preston & Johnson, 2011). The typical antipsychotics which are equally effective if given in equioptent doses to block dopamine receptors are more likely to cause extrapyrmidal side effects (parkinson-like side efects, akathesia, acute dystonias, and tardive dyskinesia) whereas weight gain and metabolic side effects are more likely to be observed with the atypical antipsychotics Additionally, before an antipsychotic is administered an assessment of the individual's mood state must be performed to identify any marked agitation which may require the use of an antipsychotics with a greater sedation property or the use of an antipsychotics with less sedation properties if there is psychomotor retardation and withdrawal (Preston & Johnson, 2011). The use of antipsychotics have served as a breakthrough for the treatment of psychotic disorders because they can reduce the risk of relapse with continuation of therapy and allow individual to possess some level of appropriate functioning despite the presence of a chronic disease state. The advent of antipsychotics have been able to restore some level of functionality in the thought process, behavioral patterns, and interactions that people with psychotic disorders have others and rather than sending the rest of their lives in institutions sufferers are given the opportunity to live in communities and lead active lives.

Antipsychotics have become an important and effective therapeutic intervention during critical situations where an individual may present with aggressive, combative, or agitated behavior an immediate action is required. During an acute psychotic episode an individual may display psychomotor agitation and behavior that is considered to be hostile, injurious, or destructive not only to the individual but also may be to those that are the person is around (Hersen, Turner, & Beidel, 2007). With the advent of the second-generation antipsychotics (SGAs) the decision as to which medication to use in an emergency situation has become more difficult for clinicians (Schatzberg, Cole, & DeBattista, 2010). The use of second-generation antipsychotics have superseded the first generation antipsychotics as the first-line treatment in acute psychotic episodes and this can be attributed to the fact that the second-generation antipsychotics have fewer incidences of extrapyramidal side effects (EPS), especially tardiv dyskinesia and acute dystonic reactions (Hahn, Albers, & Reist, 2008). The rate of tardive dyskinesia with the use of first-generation antipsychotics is one of the reasons why many clinicians are hesitant to use the agents for acute psychotic treatment even though second-generation antipsychotics can be more expensive (Schatzberg, Cole, & DeBattista, 2010). In the past, development of acute psychotic episode could be treated with an intramuscular injection of a first-generation

antipsychotics such as haloperidol in combination with a benzodiazepine but the advent of the intramuscular injections of olanzapine, aripiprazole, and ziprasidone which cause less EPS and work musch quicker has lead to a change in the manner that acute psychosis or acute agitation is handled in an emergency situation. Depending on the presenting situation a clinician may decide to use an older first generation antipsychotics combined with a benzodiazepine or opt for the new second-generation antipsychotics when there is a need for a rapid titration in an acutely psychotic individual (Schatzberg, Cole, & DeBattista, 2010). For all antipsychotics that are being used in an acute psychotic individual
it is best to start at a low to moderate dose and then a titration can be performed until there is a decrease in the disruptive aspects of the psychotics reaction, behavior improves, or side effects limit the dose (Preston & Johnson, 2011).
Secondly, the use of antipsychotics in early inpatient treatment is generally geared towards making attempts to move acutely psychotic patients as quickly as possible out of the hospital and in the past it was believed that higher doses of antipsychotics medication would achieve this outcome but rather these higher doses were only shown to be less effective than lower doses (Schatzberg, Cole, & DeBattista, 2010). In many cases, it may prove to be better for a clinician to use oral or parenteral benzodiazepeines to manage an individual if they are acutely psychotic during early inpatient treatment and not administer high doses of an antipsychotic which can turn out to be more risky than beneficial. Since all antipsychotics are generally equivalent and efective with average dosing it is best to try to go with the antipsychotic that worked for the patient in the past if a comprehensive medication history is able to be gathered (Hahn, Albers, & Reist, 2008). The desired outcome is to select a drug that the individual has responded to in the past and use this drg early on during the inpatient treatment. Once an attempt has been made with this drug at an adequate dose and there is no improvement in the individual then one may have to resort to selecting another antipsychotics keeping in mind that the change might lead to improvement in the person's condition or demonstrate no improvement (Schatzberg, Cole, & DeBattista, 2010). If there is no response after 2 weeks in a person that is sgnificantly psychotic on a particular antipsychotic who is receiving inpatient treatment or after 5-6 weeks in a person who has less severe symptoms it is best for a clinician to reevaluate their selection and possible factors that could be causing nonresponse. In some cases, there may be overt or covert side effects that are causing the lack of response or even reconsidering the diagnosis and the therapeutic approach that is being taken. The purpose of using antipsychotics for early inpatient treatment is to attempt to achieve rapid response so as to stablize an individual and in the inpatient setting provides a controlled environment where an individual can receive one-on-one care and attention to thoroughly treat their condition. When it comes to maintenance treatment, the intent is to help to maintain recovery after a psychotic episode. Antipsychotics have been shown to be effective in preventing relapse of schizophrenia but there is the problem with discontinuation rates among this population as 25-50% will generally experience a relapse as a result of compliance issues (Schatzberg, Cole, & DeBattista, 2010). The use of the second-generation antipsychotics are considered to be best choice for maintainence treatment for schizophrenia based on the reduced rate of EPS, improvement of cognitve, postive, and negative symptoms of schizophrenia. While the intent of antipsychotics maintenance therapy is to prevent or reduce the incidence of relapse there is about a 50%-70% chance that individuals will experience relapse while on this therapy and it can be difficult to assess whether the relapse can be attributed to non-compliance or because the antipsychotic medication stopped working in the individual. In some cases, where complaince with maintainance antipsychotic therapy is a problem the use of depot formulations (i.e. risperidone) may improve compliance because whereas oral formulations may require everyday dosing, the riperidone injection is every two

weeks. There is also the option of depot intramuscular formulation of the typical antipsychotics flupenazine given every two weeks and haloperidol given every four weeks so this can help to improve compliance (Hahn, Albers, & Reist, 2008).

Antipsychotics have been shown to be shown to be versatile and effective in the treatment of other psychiatric disorders such as bipolar disorder, unipolar depression, anxiety disorders, and personality disorders to name a few. In the treatment of bipolar disorder, all of the second-generation antipsychotic medications with the exception of clozapine have been shown to be effective in the treatment of acute mania and they can also be used in bipolar depression. As it currently stands, aripiprazole, olanzapine, ziprasidone, and risperidone have received FDA approval for the treatment of acute mania related to bipolar disorder. For the treatment of unipolar depression, antipsychotics can be used for psychotic depression in combination with an antidepressant and a trial comparing combination fluoxetine with olanzapine and olanzapine monotherapy showed that the combination treatment showed good efficacy (Schatzberg, Cole, & DeBattista, 2010). The dosing for antipsychotics used in psychotic depression are typically high but the reason for these high doses is still unknown but in the meantime the use of second-generation antipsychotics for the treatment of depression is becominng more and more recognized. When it comes to anxiety disorders, second-generation antipsychotics are currently being used in the tretment of generalized anxiety disorders with quetiapine being the most studied antipsychotic in controlled trials. Antipsychotics have also been showne to be useful with obsessive-compuslive disorders coupled with schizotypal personality or schizophrenia, and they are also used in post-traumatic stress disorder to treat symptoms of agitation, aggression, and sleep disturbances that can be associated with the disorder. With regards to personality disorders, antipsychotics have been used for borderline personality disorder and schizotypal personality disorder for a great number of years but there are few studies to support this indication but in recent years second-generation antipsychotics are being studied as it relates to the treatment of borderline personality disorder and their is growing evidence to support the benefits such as with the use of olanzapine (Schatzberg, Cole, & DeBattista, 2010).

The advent of antipsychotics for acute and maintenance treatment of psychotics disorders has enabled many individuals to be able to lead productive lives despite their diagnoses and with as with each passing day new indications for antipsychotics are being discovered and provide hope for individuals who might have otherwise have none. The ability to effectively treat the core symptoms of certain psychotic disorders is a goal that science is working dilligently to achieve and has it currently stands great strides and accomplishments have been reached.

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