Risk of Diabetes while taking prescribed antipsychotic medication

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**Introduction**

It has been observed that patients with schizophrenia are at a higher risk of developing diabetes as compared to the general population. The outcomes of this result in contributing to a high risk of cardiovascular complications. The matter of fact is that a person with schizophrenia is two to three times more likely to die from cardiovascular disease. It can simply be said that the risks related to diabetes are particularly increased, because of a few atypical antipsychotic drugs. Studies and researches show that younger patients under 40 years of age who take an atypical antipsychotic drug are at high risk of type 2 diabetes.

There has been observed an increased risk of diabetes among the patients having schizophrenia. There is no doubt that this risk has been elevated by some antipsychotic medications. The risk of diabetes is considered to be greater with olanzapine along with clozapine that are atypical drugs. Weight gain can be seen as a mechanism that develops diabetes. However, another thing to take into consideration is that the direct effect of such drugs on insulin action in muscle can be seen as an important contributor. There is a high need to manage patients with significant psychosis just like a patient with diabetes.

In the past, it was reported, an impaired action of insulin in patients diagnosed by schizophrenia and later confirm in Australia. At that particular time, it was found that the prevalence of diabetes in patients having schizophrenia is greater than others. However, one thing that must be taken into consideration is that the mechanisms underlying the relationship between diabetes and schizophrenia remain unknown.

**Antipsychotic Drugs and Diabetes**

In the current scenario, there is no doubt that a number of antipsychotic medications tend to increase the risk of diabetes among patients having schizophrenia. There are some atypical medications that can be taken into account in such a scenario. The reason for that is quite simple as such medications have a lower rate of an extrapyramidal adverse effect than butyrophenones and phenothiazines that are considered older classes of medication. Although there are some atypical drugs that are better tolerated, it must be taken into consideration that such drugs tend to increase the incidence of diabetes as well. All antipsychotics do not increase the risk of diabetes to an equal extent. Surveys show that the risks to develop diabetes over a year are high with ‘low potency’ and olanzapine conventional antipsychotics. Almost 36.6 % of patients that are given the treatment of clozapine tend to develop diabetes over a five-year period.

**The link between Schizophrenia and Diabetes**

It is true that antipsychotic drugs came a long time after it was known that diabetes is common in patients having schizophrenia. Diabetes is not considered a problem of a single state like Australia, but the whole world has to suffer from diabetes. Countries like the U.S. regardless of being a developed country has a lot of issues related to diabetes. Researches and studies have shown that patients with schizophrenia in America have a rate of diabetes 6.2-807%. Looking at such studies, it is clear that the rate is strikingly high, and the numbers are ever increasing not only just in Australia but other countries too.

**Mechanism of Antipsychotic-induced diabetes**

When it comes to diabetes due to prescribed antipsychotic medication, it has been found that the mechanisms which tend to elevate the risks related to diabetes are associated with a number of antipsychotics, and are not completely understood. In most of the countries, scientists have found that atypical antipsychotics are responsible for gaining weight. Another thing to take into consideration is that the magnitude of the gained weight correlates with the magnitude of therapeutic response (Cooper et al., 2016). It has been found that the weight gain due to antipsychotic medication is a variable as well.

When it comes to gaining weight, olanzapine along with clozapine tends to play a vital role. On the other hand, amisulpride and aripiprazole are causes least gain. The moderate gain comes with quetiapine and risperidone. However, in the current scenario, there is no sufficient information available about a few new drugs for knowing what their diabetogenic potential and weight gain will prove to be with more widespread use. Moreover, there is a high chance that obesity may precipitate diabetes in individuals. Therefore, it can be assumed that weight gain is a mechanism for the increased incidence of diabetes.

Diabetes that is in relation to antipsychotic medication has an association with high insulin concentrations. Due to this reason, a lot of individuals may see drugs can aggravate insulin resistance that is already presented in patients with schizophrenia. Moreover, it must be realised that antipsychotic inhibit glucose transport into muscles. The matter of fact is that there exists a strong correlation between the capacity of such drugs for inducing hyperglycaemia in vivo and inhibiting glucose transport in vitro.

**Management of Diabetes in Patients**

In the 21st century, diabetes is considered a serious medical development that tends to require sudden intervention along with possible lifelong management. In most of the times, there is a high need for antidiabetic medication for the patients as it is the only solution to make them feel better at that time. Schizophrenia is undoubtedly considered as a serious illness. The outcomes of this result in demands the management to continue antipsychotic drugs. It has been observed that the effective management of the two conditions tends to demand a committed and careful collaboration between both diabetology and psychiatry that in actual are two medial teams.

The course of schizophrenia is most of the times seen as multiple acute episodes of disability interspersed and frank psychosis with periods of milder symptoms. A number of patients are seen as normal between acute episodes. In that particular case, acute episodes are seen becoming more severe with the passage of time. Research and studies have shown that the prognosis is undoubtedly good in patients who tend to take antipsychotics continuously between acute episodes. Such people are seen taking antipsychotics even if they do not have any sort of symptoms at all. For that being said, antipsychotics are often reducing not only just the intensity of relapses but frequency as well.

Due to this, there is a high chance that if some antipsychotic drugs are stopped, it may result in resolving diabetes triggered by it. Although there are some conventional neuroleptics that do not have a high potential for causing diabetes, if an atypical is replaced by a conventional neuroleptic, it might result in reduced compliance and may be resulting in motor side effects. Apart from this, the outcomes of this may result in increasing severity of symptoms that are not positive, and these may include lack of initiative, poverty of thought, and social withdrawal. When it comes to the atypical antipsychotics, it has been observed that risperidone tends to have the least propensity for causing diabetes.

Withdrawal from clozapine is not considered an easy task due to the development of a so-called rebound effect. Due to this effect, the condition of a patient may become worse than before starting the drugs (Correll et al., 2015). Therefore, there is a high need to carry out the withdrawal of clozapine in a slower manner over a period of certain months or weeks. It has been observed that the patients with clozapine are severely ill, and are most of the times failed to respond to other agents. At that particular point of time, it becomes necessary for persisting with clozapine and managing diabetes.

A high-fat diet that is in combination with physical inactivity tends to contribute to weight gaining along with predisposes susceptible individuals to type 2 diabetes. The outcomes of this result in making lifestyle management central to long-term care. A large number of patients that are having type 2 diabetes, the significant pathological hazard is accelerated coronary heart disease and stroke (Galling et al., 2016). In most of the people, a common bad habit is excessive smoking. Smoking is undoubtedly injurious to health, and in the case of patients with schizophrenia, there is a high probability that such patients will be affected greatly by this problem. In a nutshell, it can be said that it has become quite important for monitoring coronary risk factors such as dyslipidemia and hypertension on a daily basis.

It is understandable that when it comes to managing diabetes in patients having schizophrenia, it becomes quite complicated by a patient's lack of insight, cognitive defects, and loss of initiative that are considered central features of the illness. One thing that must be taken into consideration is the fact that it is not an easy task to ensure that patients follow dietary advice regardless of being in the supervised environment of psychiatric units. A number of patients with active psychosis can never self-inject, manage their own food intake, calculate insulin doses, and monitor the concentrations of their own blood glucose.

In most of the cases, patients having schizophrenia do not find it convenient attending outpatient clinics on a daily basis (Pérez et al., 2016). Such patients may not successfully adhere to treatments. Due to this, it is considered bad, the medical outlook for a patient with schizophrenia, and it can be reflected in their influence increasing rates of coronary heart disease. In the current scenario, it can simply be said that due to this, the management of diabetes is seen presenting special problems that require close supervision for avoiding acute problems like ketoacidosis and hypoglycemia.

There is no doubt that the primary use of them is in schizophrenia, but it must be taken into consideration that atypical antipsychotics are used in a number of different of other illness. Such illness may include psychological and behavioural symptoms of dementia, bipolar disorder, and some psychiatric disorders having psychotics features (Vancampfort et al., 2016). A lot of studies and researches conducted on the issue have found that patients with dementia are not younger due to which they are a higher risk to develop diabetes as compared to young patients. It can simply be said that atypical antipsychotics are required to be preferred in this context.

**Conclusion**

It is concluded that patients with schizophrenia are at a higher risk of developing diabetes as compared to the general population. The outcomes of this result in contributing to a high risk of cardiovascular complications. There is no doubt that this risk has been elevated by some antipsychotic medications. The risk of diabetes is considered to be greater with olanzapine along with clozapine that is atypical drugs. Although there are some atypical drugs that are better tolerated, it must be taken into consideration that such drugs tend to increase the incidence of diabetes as well. Diabetes cannot be seen as a problem of a single state like Australia, but the whole world has to suffer from diabetes. Countries like the U.S. regardless of being a developed country has a lot of issues related to diabetes.

In the current scenario, there is no doubt that a number of antipsychotic medications tend to increase the risk of diabetes among patients having schizophrenia. When it comes to gaining weight, olanzapine along with clozapine tends to play a vital role. On the other hand, amisulpride and aripiprazole are causes least gain. The moderate gain comes with quetiapine and risperidone. Schizophrenia is undoubtedly considered as a serious illness. The outcomes of this result in demands the management to continue antipsychotic drugs. Although there are some conventional neuroleptics that do not have a high potential for causing diabetes, if an atypical is replaced by a conventional neuroleptic, it might result in reduced compliance and may be resulting in motor side effects. Withdrawal from clozapine is not considered an easy task due to the development of a so-called rebound effect. Due to this effect, the condition of a patient may become worse than before starting the drugs. Therefore, there is a high need to carry out the withdrawal of clozapine in a slower manner over a period of certain months or weeks.

**Recommendations**

It has been observed that there is a high need for psychiatrists along with diabetologist to work together for monitoring patients prescribed atypical antipsychotics for managing diabetes and detecting impaired glucose tolerance. The outcome of this will be beneficial and will be helping to reduce the increased risks of cardiovascular diseases in patients having schizophrenia. There is a high need for particular attention to patients that take olanzapine or clozapine. In a nutshell, it can be said that the management of schizophrenia is required to include greater attention to exercise, effective diet, and medical risk programs. In most of the times, there is a high need for antidiabetic medication for the patients as it is the only solution to make them feel better at that time.

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