CASE REPORT

The Use of Aripiprazole in Early Onset Schizophrenia: Safety and Efficacy

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SUMMARY

The use of atypical antipsychotic agents in early onset schizophrenia is rising despite its limited data on efficacy, safety and tolerability. Early onset schizophrenia warrants effective pharmacological treatment that is safe and well tolerated by children and adolescent population. Existing atypical agents are not completely free of side effects. Aripiprazole has unique properties that differ from other atypical antipsychotics and fill up the missing gaps, as it is associated with minimal metabolic complications and extrapyramidal side effects that are more commonly seen in other atypical agents. It offers a better option for this population and may possibly be considered as first line treatment in future. This case report demonstrates the efficacy and safety of Aripiprazole in children and adolescent population.

KEY WORDS:
Aripiprazole, Atypical antipsychotics, Early onset schizophrenia

INTRODUCTION

Early onset schizophrenia which begins before the age of 18, denotes a more severe form of schizophrenia associated with strong genetic predisposition. The diagnosis is less common than that of its adult counterpart. It is estimated that early onset schizophrenia occurs at approximately 50 times less frequent than adult onset schizophrenia. One earlier study showed that the prevalence rate is less than one child in 10,000 children between 2 and 12 years of age[1]. Although it is rare, it is commonly related to poor outcome in comparison to that of adult onset schizophrenia. Thus, early detection and treatment that are more effective than the existing ones are important for favourable long-term outcome.

As with adult onset schizophrenia, the choice of pharmacotherapy for the early onset is atypical antipsychotics because of their broad efficacy on illness symptomatology and minimal adverse events. Their use in adolescent population has been extensively practised despite its limited controlled data on the efficacy and safety. Their growing popularity has been shown in the evaluation of atypical antipsychotics used in youths by Texas Medicaid from 1996 to 2000. It is estimated the prevalence of total antipsychotic use increased from 7.7 to 20.0 children and adolescents per 1000 enrollees[2].

Aripiprazole is the most recently approved atypical antipsychotic agent indicated for the treatment of adult onset schizophrenia. It acts as a potent partial agonist in the dopaminergic system at both the presynaptic and postsynaptic D2 receptors. Among its unique properties that make it different from other atypical antipsychotics is its ability to produce intrinsic dopaminergic activity. Despite its special mechanism of action and low incidence of adverse events that are commonly associated with other atypical antispychotics, its use is not indicated in children and adolescents below 18 in Malaysia. Therefore, its off label use in early onset schizophrenia in local clinical setting is mainly investigational.

CASE REPORT

Fifteen year old Miss LMM was presented with a history of a change in behaviour at the age of 13. She had third person auditory hallucination and was noted to be socially withdrawn by family members. There were times she talked and laughed to herself. She refused to go to school and there was deterioration in her academic performance. Pre morbidly she was actively involved in school extra curricular activities and obtained grades 3 As and 4 Bs in her Standard 6 examination. There is a strong family history of psychiatric illness whereby her paternal grandmother and aunt also had similar symptoms and were treated by psychiatric doctors.

She was first started on atypical antipsychotic Risperidone at a very low dose but experienced excessive sedation at daytime. She had a rigid posture and complained of mild stiffness of the limbs as noted by her father. In view of that, her father stopped the medication. Following that, he had been doctor shopping for medications that were more suitable for the patient. She was prescribed with other available antipsychotics, the names of which her father could not recall, and again she experienced the similar adverse effect of excessive sedation. There were no extrapyramidal side effects noted during that time. Her father prematurely stopped them because he noticed that the patient frequently fell asleep during the day. She was inadequately treated for that reason. The symptoms of the illness were still present and she had not been functioning well socially and academically for about a year and a half until she was started on Aripiprazole.

Psychoeducation was given to the patient and her father to ensure treatment adherence before commencing on Aripiprazole. All blood investigation results were within normal range and her body weight was 58kg. She was prescribed on Aripirazole initially at a low dose with gradual

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titration until it reached 15 milligram daily. Her recovery was slowly evident after two months of starting Aripiprazole. She tolerated Aripiprazole well and did not experience any side effects from the medication. The symptom of auditory hallucination started to fade away. She was more forthcoming and beginning to attend school regularly. She has joined Girl Guide activities and expanded her circle of friends in school. During follow up in the clinic, she was spontaneously relating her Girl Guide activities in school and her growing interest in Arts and English subjects. She is now preparing for her Form Three Examination and is confident of obtaining good examination results.

Miss LMM has shown remarkable improvement in the illness symptomatology with the resolution of psychotic symptoms and marked recovery of her level of functioning without any evidence of distressing adverse events from Aripiprazole. This in turn has helped in establishing better therapeutic alliance between both the patient and treating doctor. Subsequent to that, it also reinforces the trust of family members on patient's adherence to treatment and has stopped the vicious cycle of doctor shopping for better and more suitable medication than the previous ones.

DISCUSSION

The use of antipsychotics remains one of the integral parts in the treatment of early onset schizophrenia despite limited evidence of its efficacy and safety on children and adolescents. In general, antipsychotics relieve acute psychotic episodes and prevent subsequent relapse of the illness. Its use also aims at maximizing functional capacity and optimizing quality of life of individuals who suffer from the illness. It is acknowledged that atypical antipsychotics offer advantages such as broader spectrum of efficacy and better-tolerated side effect profiles.

Although most data from controlled studies on atypical agents have shown superior efficacy against the spectrum of illness symptomatology, there are some differences that exist among them particularly pertaining to other adverse effects such as weight gain, metabolic complications and diabetes risk[3]. Therefore, the choice of atypical agents for paediatric population must also consider all these before one decides to prescribe them.

Similarly, with other atypical agents, the use of Aripiprazole in early onset schizophrenia is limited in view of insufficient good controlled data on it. However, its different mechanism of action compared to other atypical antipsychotics and its association with minimal weight gain and extrapyramidal symptoms as well as non-significant prolactin elevation and QTc prolongation could offer better treatment options for the children population[4].

Evidences from open label studies to evaluate efficacy, safety and tolerability of Aripiprazole in children and adolescents have shown that it significantly reduces symptoms severity, is well tolerated by patients and does not contribute to weight gain[5]. Although arguments may arise on the point that open label and naturalistic studies produce biases and limit generalizability of the results, those evidences warrant randomized controlled trial of Aripiprazole in paediatric population. As such, the role of Aripiprazole could be strongly considered in the treatment of children and adolescents below 18 years of age.

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