

ANTIPSYCHOTIC TREATMENT - SIDE-EFFECT AND/OR METABOLIC SYNDROME

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SUMMARY

According to current medical opinion chronic mental diseases such as schizophrenia require life-long treatment. The choice of antipsychotics is an important treatment factor, since their side-effects often influence patients' compliance with treatment. Severe side-effects may cause the patients to reject such treatment, the latter being their right. In case a psychiatrist does not agree with the patient's decision to interrupt his antipsychotic treatment regardless its serious side-effects, the former should be persistent in convincing the patient to replace such drug with a more appropriate therapy.

Key words: schizophrenia- atypical antipsychotics- side-effects

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INTRODUCTION

Schizophrenia is a chronic and irreversible mental disease, and it is therefore not curable but requires a life-long treatment with appropriate drug therapy. The objective of such treatment is to prolong the remission intervals and to establish appropriate working and social functioning of the affected patients. Specific signs and symptoms of schizophrenia are present for a significant portion of time during a 1-month period and include numerous cognitive and emotional impairments with respect to perception, inference, speech and understanding, behavioural control, feeling, thought and speech organisation and fluency, loss of enjoyment, will power, instincts and attention.

None of the aforesaid symptoms itself is pathognomonic of schizophrenia, but the diagnosis of this chronic mental illness should include the detection of numerous signs and symptoms accompanied by a remarkable impairment of social and occupational functions (American Psychiatric Association 2000).

A female patient described herein is affected by schizophrenia and olanzapine treatment established a stable remission. However, due to the receptor binding affinity for olanzapine, the patient experienced weight-gain and eventually metabolic syndrome also developed. Such condition required an immediate therapy replacement which the patient refused for a long time. However, the psychiatrist was persistent and introduced another antipsychotic which effectively reduced metabolic syndrome symptoms.

CASE REPORT

A 28 -year old female patient visited a psychiatrist accompanied by her mother. At the age of 24 she had a short hospitalisation due to communication and social adjustment difficulties, social isolation and difficulties in establishing close relationships. Her religious ideas were overemphasized. After 3 weeks acute psychosis was diagnosed. However, after discharge the patient neither continued visiting a psychiatrist, nor she took the advised medication therapy. Six months later the patient joined a very strict Roman Catholic female order which does not allow any contact with the outside world. However, she voluntarily chose to leave this environment, although she maintained exaggerated religious thoughts.

Eight months before the aforesaid visit to a psychiatrist, the patient came into conflict with her religious congregation, stopped going out and continued experiencing exaggerated religious ideas accompanied by paranoid perception of reality. She also developed suspicions of being eavesdropped and followed.

In December 2007 the patient visited a psychiatrist urged by her mother, who seems to be over-protective. It was revealed that over the last several months the patient experienced social isolation and anxiety she could hardly control and that she had insane religious ideas and paranoid delusions. Schizophrenia was diagnosed on the basis of such specific psychopathology and its duration. Olanzapine was introduced and gradually titrated for three weeks up to a stable dose of

10 mg and was combined with alprazolam (1,5 mg/day). Before introducing olanzapine, the patient's weight amounted to 58 kg. The patient's mental state considerably improved and, after a two-month treatment, a favourable remission was established. In addition to psychopharmacotherapy, a supportive psychotherapy once a week was also advised and the patient accepted and attended regularly.

After a four-month combined therapy the psychiatrist noticed the patient gained weight and confronted the patient about it in May 2008. However, the patient as well as her mother who accompanied her ignored such fact since her mental condition had considerably improved and she established favourable social relations. Still, the patient agreed to monitor her weight since it was evidenced she had gained 6 kg (64 kg). Although a low-calorie diet and regular physical activity were advised, control measurements revealed continuous weight gain. After a 12-month treatment the psychiatrist suggested to replace the antipsychotic although the patient had reached a stable remission. Both the patient and her mother rejected such suggestion although the patient's weight had reached 72 kg. The psychiatrist frequently insisted on the therapy replacement but the patient continued refusing such change. After a while the patient obtained an employment and established an emotional relationship (without intimate contact).

After a two-year treatment (in December 2009) the patient weighted 82 kg (she gained 24 kg) and she developed metabolic syndrome (fasting glucose level: 8 mmol/L, serum triglyceride: 3.3 mmol/L, cholesterol 5,8 mmol/L, hypertension 150/100 mmHg). Faced with such values and persuaded by the psychiatrist, the patient finally accepted to change the therapy. In January 2010 the olanzapine dose was gradually reduced and finally withdrawn from therapy while during the next three weeks ziprasidone was introduced up to a stable dose of 120 mg/day. The patient also continued attending supportive psychotherapy sessions once a week. The correction to antipsychotic did not affect the established remission and the patient maintained appropriate social and occupational functions. Up to January 2011 the patient lost 13 kg (actual weight: 69 kg), her blood pressure was regulated /135/95 mmHg while laboratory values were within the reference range (fasting glucose level: 4,7 mmol/L, cholesterol 5,4 mmol/L, serum triglyceride: 1.4 mmol/L).

DISCUSSION

Schizophrenia is a severe mental disease often occurring in adolescence or young adult stage, as in the case of the described patient. Antipsychotics (typical or atypical) have a key role in the treatment of this disorder (Breier 2005, Uzun 2005), while their choice depends on the clinical picture, compliance with medication in

individual patients as well as on the psychiatrist's knowledge and clinical practice (Dadić-Hero et al. 2010).

Olanzapine is an atypical antipsychotic to which the patient described responded well and established a favourable remission. However, due to the receptor binding affinity for olanzapine, the patient experienced its side-effects, i.e. considerable weight gain and she eventually developed metabolic syndrome.

At first, the psychiatrist's efforts and persistence to face the patient with olanzapine side-effects were not effective. Namely, in this case, the replacement of olanzapine and the introduction of another antipsychotic could have increased the risk of relapse (Rossi et al 2011). However, faced with the results of both laboratory and internist examinations, the patient accepted the suggested therapy changes and was acquainted with all the risk of such procedure.

Ziprasidone was chosen since it has pharmacologically important activity at serotonergic, dopaminergic and adrenergic receptors (McEvoy et al 2007). This pharmacological activity led to early speculation that the agent might have antidepressant or anxiolytic qualities as well as antipsychotic potential (Green 2001). In a meta analysis Allison et al (1999) found that whereas placebo was associated with a mean weight reduction of 0.74 kg antipsychotics usually led to weight gain. Mean weight changes were as follows: clozapine 4.45 kg, olanzapine 4.15 kg, risperidone 2.10 kg and ziprasidone 0.04 kg (Green 2001).

After a gradual antipsychotic titration, the substitution of antipsychotic followed and a stable remission of disease was maintained. One-year ziprasidone treatment gave excellent results, i.e. body weight reduction, blood-pressure regulation and normal laboratory reference values.

Still, a doubt remains: did our patient experience reversible olanzapine side-effects or a real metabolic syndrome?

CONCLUSION

Each medication, antipsychotics included, has potential risk of side-effects development. In the case presented above olanzapine, an atypical antipsychotic, ensured a stable remission of the discussed chronic mental disease, but it also caused side-effects to develop. Such side-effects presented a legitimate indication to replace the used antipsychotic with ziprasidone which proved to be a good treatment choice. It was equally effective in reducing mental symptoms and it considerably contributed to reduce body weight and regulate laboratory values.

Although the results in this clinical case can not be generalised, they do prove that the antipsychotic should be chosen on an individual basis, and that the psychiatrist's persistence combined with the patient's compliance have an important role in antipsychotic treatment.

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