

THE INFLUENCE OF SIDE EFFECT OF ANTIPSYCHOTIC ON THE COURSE OF TREATMENT IN ADOLESCENT

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SUMMARY

The use of antipsychotics in treatment of children and adolescents requires good knowledge of psychopathology, psychopharmacotherapy, developmental processes and family relations.

It is necessary to have parental consent for the use of a medication in this age, with previous explanation of therapeutic goals, limitations and possible side effects of antipsychotics. The number of antipsychotics registered for use in children and adolescents is quite limited. The combination of clinical experience of those working with psychotic adolescents and a good collaboration with parents, creates a therapeutic space where good results in treatment can be achieved. Side effects, though rarely, can bring in question the course of treatment and disorder follow up.

In this work we will present a 14-year old girl adolescent with psychotic symptoms, in which case the course of treatment and discontinuance of therapy was caused by a side effect - an oculogyric crisis.

Key words: side effect – antipsychotic – adolescence - compliance

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INTRODUCTION

The use of psychopharmacs in treatment of children and adolescents has its particularities compared to the use of psychopharmacs in adults, because, besides the indications for the use of a medication, it is necessary to have in mind developmental processes as well as the family context where the child was brought in (Sadock et al. 2003). Also, it is very important to get parental consent for the use of a medicament, with previous explanation of therapeutic goals, limitations and possible side effects. Additional problem is a small number of psychopharmacs with declaration for the use in children and adolescents (Bujas Petković 2006).

Psychotic disorders in children and adolescents can be acute and transient or can lead to a longterm and chronic illness with a bad prognosis and longer treatment needed (Nikolić et al. 2004).

In medical treatment of psychotic disorders in children and adolescents antipsychotics are used, primarily those of second and third generation of antipsychotics, due to their good efficiency and less side effects, which definitely are their advantages.

Risperidone is an antipsychotic of the second generation and has its place in treatment of psychotic disorders, due to the combined antagonistic effect both on dopaminergic (D2) and serotonergic (5-HT₂) receptors (Leysen et al. 1988).

The medication is useful for reduction of psychomotor agitation, aggression and auto-aggression, mood changes and insomnia, and the recommended daily dosage is in the range of 0.5 and 6 mg, or 2-10 mg (Green 2001, Grcevich et al. 1996). In our country antipsychotic risperidone is registered for adults and children over the age of 15.

Antipsychotic therapy can cause extrapyramidal side effects (EPS), that include parkinsonism, dystonia, akathisia and tardive dyskinesia. Clinical studies have shown that incidence of extrapyramidal side effects are lower when antipsychotics of the second and the third generation are used, compared to the use of antipsychotics of the first generation. In approximately 10 percent (10%) of patients treated with antipsychotics of the second and the third generation dystonia occurs in first hours or days of therapy. Dystonic movements are a consequence of slow, permanent muscular contractions or spasms, that can lead to involuntary movements. Dystonia can affect the neck, jaw, tongue, eyeballs or the whole body. When dystonia affects the eyes, it is called oculogyric crisis, characterised by eyeball movements toward superior and lateral direction. Dystonia most often appears in younger men, but it can affect both genders, in any period. It is presumed that dopaminergic activity in the basal ganglia, that appears when concentration (level) of antipsychotic begins to decrease, is responsible for this particular side effect (Uzun et al. 2005).

Jerrell et al. (2008) in their research on side effects in children and adolescents treated with antipsychotics conclude that exposure to risperidone, multiple antipsychotics and serotonin-specific reuptake inhibitors consistently confers a higher risk of developing a range of neurological adverse events (side effects) in young patients, especially those with preexisting central nervous system disorders, mental retardation, or cardiovascular disorder (Jerrell et al. 2008).

CASE REPORT

A 14-year old girl, a student of an eight class of elementary school, was referred to a psychiatric evaluation by a school psychologist, who has had this patient in treatment for the last three years, because of her poor school results and difficulties in communication with children of the similar age.

The patient comes accompanied by her mother, who she's very close to. She is the youngest child in the family, she lives with her parents. Her sister and brother are more than 15 years older than she is, they have their own families and so they live apart. Her father works outside their home place, and is only periodically present in the family. Her mother is a housewife. Mother's pregnancy was carried out without any problem, the patient was born on time, but on the backside, and with a low Apgar index score (3/10). She was breastfed for less than one month. As an infant, just few months old, she was operated because of pyloric stenosis. Early psychomotor development was proper, with her mother's hyperprotectiveness. She was admitted to kindergarten, but she could not adapt there, she refused to talk or eat, so her parents wrote her out of kindergarten. In the age of 6, she began to attend preschool program. She started attending first class of elementary school when she was 7; she had difficulties in adaptation and learning. She had to repeat first class. Other children in school often mocked her, she didn't have any friends. Her parents organised additional instructions for her and helped her in learning. In despite of all her parent's help, her school marks were only average in first classes, and barely enough to pass in other classes.

The reason why she was referred to a psychiatric examination was her excessive tendency to daydream, which was also the diagnosis of her family doctor. The patient says that she always loved to daydream, especially in the last year. She daydreams about fairy-tales characters and their lovely, exciting adventures. She loves fairy-tales

written by Esop; «...I'll have to read them all over again, because I forgot where I stopped reading...». She denies her school obligations and doesn't fulfil them. She spends most of her time in non-obligatory activities and having fun, watching TV, usually loves films, and plays computer games.

Psychologic evaluation done in the age of 7 and 8 shows reduced mental capacities.

Work diagnosis: Pseudologia phantastica. Insuffitientio intellectualis?

It was suggested to do electroencephalogram (EEG), to repeat psychological evaluation, and to do a neuropediatric evaluation.

The second psychiatric examination was six months after, in the second semester of eight class (last in elementary school), the patient comes again with her mother. The electroencephalogram and neuropediatric evaluation (done in the meantime) were both in order.

Psychological evaluation presents average mental capacities, which is different compared to previous findings. The psychologist recommended psychotherapeutic treatment, which the patient has been attending for the last few months; this is their explanation for not coming to psychiatric follow-up examinations. The patient's mother said that she had noticed positive achievements in communication at school and at home.

Six months after, the patient comes again, accompanied by her mother and mother's sister. She's now attending first class of high school (professional), has mostly negative marks. Mother reports that her daughter's daydreaming has become more intensive lately.

The adolescent says that all of a sudden she gets this idea to present herself falsely, as another person, to other people she contacts by telephone or sends textual messages on their mobile phones. She says that she has relations with boys, which in reality is not true. She presents herself as an imaginary person, sends love messages to people, arranges love dates with them, and afterwards cancels these dates with unrealistic excuses (that her mother died, or that she has to be with her sister who is about to have a baby). Over the mobile phone she presented as a boy to a girl from her class, and then sent her love messages. When communicating over the phone or with strangers she is very open and talkative, but in a more direct communication with people she is very reserved and introvert. She complains that she sometimes feels a blockade in her head, like «some door closes», she can't explain that. When her father is at home, she «hides» her fantasies, doesn't talk about it, because she is afraid of his anger. While talking

about her «fantasy world», the patient seems anxious; she doesn't understand why she's behaving this way, she wishes to stop, but she can't, it is stronger than her will. The psychiatrist recommends hospitalisation, with possible observation of the girl's behaviour, evaluation of the symptoms and standard examinations; both patient and her mother agreed, so the date of the hospitalisation was decided.

During inpatient treatment, routine laboratory tests were done and were normal; the EEG showed slightly accelerated pattern.

Extended psychological evaluation indicated a qualitative and quantitative cognitive function that was on the level lower than the average for her chronological age; without certain signs of organicity. Projective tests showed extremely low index of reality control, perseveration of thinking, and declination in contacts with people. The level of dissociative experiences was elevated in direction of derealization and depersonalisation, with a feeling of being threatened by others.

The first two days of hospitalisation the patient was not given any psychopharmacs. Her behaviour was very regressive and disorganised, with reduced capacities to test reality, and had occasional abrupts of dissociative phenomenology. She elaborated her anxiety attacks through physical activities, and when needed an anxiolytic medication was given. Her contacts with other adolescent patients in the same inpatient unit and with the members of the therapeutic team were reduced and superficial.

We decided to apply low daily dose of risperidone – a generic medication (1 mg) per os, in the evening. We used generic, not an original medication, respecting recommendations of health sector economy. The effect of the therapy was measured with the use of Clinical Global Impression Scale (CGI) and Brief Psychiatric Rating Scale (BPRS). The daily dose of risperidone wasn't elevated. The girl was discharged after eighteen days of inpatient treatment, six days after risperidone was first prescribed.

Diagnosis at discharge: Nonspecific developmental disorder with disorganised behaviour (F 84.8).

On the way home, the patient experiences extrapyramidal symptom – oculogyric crisis; therefore her mother brings the patient back to hospital, where the psychiatrist prescribes biperiden and diazepam, which are then applied intramuscularly. In one hour, symptoms of this oculogyric crisis gradually disappear. The patient and her mother were advised to prolong the

hospitalization for a few days, but the mother resolutely refused that suggestion. Risperidone was removed from therapy, and the control examination was set in seven days, if needed even before. The adolescent did not appear to this control appointment.

DISCUSSION

In everyday clinical psychiatric practice we come upon many difficulties that can affect diagnostic evaluations and the treatment of adolescents.

In this clinical case, the most important question refers to diagnostic evaluation.

Diagnosis at discharge from inpatient treatment was – Nonspecific developmental disorder with disorganised behaviour (F 84.8) is based on criteria in ICD-10 (International Statistical Classification of Diseases and Related Health Problems 1992) classification of illnesses. This diagnosis is defined in a group of Pervasive developmental disorders (F 84), characterised by qualitative abnormalities in social relations and communication models, and limited, stereotypic, repeated activities and interests in every situation of one's function. Because of a very nonspecific clinical presentation, we decided to use additional diagnosis (F 84.8), that indicates Other childhood developmental disorders.

This case report shows how in children and adolescents it is sometimes very difficult to clarify whether the child is daydreaming or is actually psychotic. Reduced social interactions, especially the absence of social relations in the group of children of the same age, with persistence of disorganised behaviour are considered a key diagnostic criteria. The experience of a clinical psychiatrist in treating psychotic adolescents was very important in deciding what would be the diagnosis. Extended psychological evaluation of a clinical psychologist confirmed the psychiatrist's evaluation, and made easier the conclusion that this was a disorder of a psychotic level.

Side effect of an antipsychotic (which both patient and her mother experienced as very dramatic) made for us impossible to follow the course of the disorder and to follow up clinical presentation in the context of development.

Side effect (oculogyric crisis) was the reason of disrupted therapy and compliance. Creating a therapeutic relation with adolescent patient and her mother during outpatient treatment made it easier for them to agree to a hospitalisation. The appearance of oculogyric crisis in this patient

questioned previously created therapeutic relation, which at the end was inadequate to continue the treatment and evaluation of the patient. Non-appearance to agreed psychiatric control can be interpreted as a lack of confidence in continuance of treatment.

In treatment of psychotic disorders in children and adolescents we usually used original medications – antipsychotics, and during ten year clinical practice we didn't have similar experiences.

The results of researches show that in general, in treatment of children and adolescents with risperidone only mild drug-induced side effects were experienced, and it is speculated that the gradual titration of risperidone was crucial in achieving a relatively low rate of EPS (Grcevich et al. 1996).

Our clinical presentation of treatment of an adolescent with psychotic symptoms, indicates that, in spite of low doses of risperidone in generic form, side effects are not excluded, and that wasn't noticed when original antipsychotics were used in the same doses.

CONCLUSION

Diagnostic evaluation of psychiatric disorders in adolescence is a very complex process that includes evaluating the symptoms, developmental processes and interactions with the family the patient was brought in.

For the use of an antipsychotic we had mother's consent, and we explained this use with expected good effects of the medication and lower incidence of adverse events, accordingly with our clinical experiences.

In the treatment of psychotic disorder in our adolescent patient we used a low daily dose of

risperidone (1 mg) per os, very soon followed by amelioration.

Side effects were not expected, especially not during sixth day of therapy.

The side effect was successfully resolved with application of the specific therapy within one hour of appearance.

In spite of that, the patient and her mother experienced the oculogyric crisis as a very dramatic event, which resulted in interruption of therapy, compliance and follow up of the course of the disorder.

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