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## CHALLENGES OF ASSESSMENT AND TREATMENT OF ULTRA HIGH RISK FOR PSYCHOSIS IN AN ADOLESCENT

Vlatka Boričević Maršanić<sup>1,2,3</sup>, Josipa Jukić<sup>1</sup> & Mia Flander<sup>4</sup>

<sup>1</sup>Psychiatric Hospital for Children and Adolescents, Zagreb, Croatia

<sup>2</sup>Faculty of Education and Rehabilitation Sciences, Zagreb, Croatia

<sup>3</sup>Josip Juraj Strossmayer University of Osijek, Faculty of Medicine, Osijek, Croatia

<sup>4</sup>SUVAG Polyclinic, Zagreb, Zagreb, Croatia

### SUMMARY

The onset of psychosis is typically preceded by a prodromal phase that is characterised by the emergence of "attenuated" psychotic symptoms. This phase is described as ultra-high risk (UHR) or at-risk mental state (ARMS) of psychosis. Criteria have been established for identifying these young people who are at clinical high risk. People at ultra-high risk (UHR) of psychosis have about 30% chance of developing the illness within two years. This category was introduced with the goal of developing treatments for prevention of psychotic disorders. Recent research suggests that early interventions appear to be effective in delaying and even preventing the onset of psychosis. These treatments include antipsychotic medication, nutritional supplements such as omega-3 fatty acids and psychological treatment. Cognitive behavioral therapy (CBT) has been tested as a potentially effective intervention in this group. Here we describe a case of a male adolescent with UHR psychotic symptoms with focus on challenges of assessing the UHR in adolescents and issues of providing effective age appropriate interventions.

**Key words:** ultra-high risk for psychosis - early detection - early intervention – adolescents - CBT

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### INTRODUCTION

Psychosis is common, severely disabling and has a major socioeconomic impact (Murray et al. 2001). The onset of the illness is typically preceded by a prodromal phase that is characterised by the emergence of „attenuated“ psychotic symptoms; because only about one-third of people with these symptoms subsequently develop a psychotic disorder, this phase is described as ultra-high risk (UHR) or at-risk mental state (ARMS) of psychosis (Fusar-Poli et al. 2013).

For the purpose of early detection, two complementary sets of clinical high risk (CHR) criteria have been developed: the ultra-high risk (UHR) and the basic symptom approach (Schultze-Lutter et al. 2015). The UHR criteria were originally developed to detect individuals with an inherent risk for a first episode of psychosis within the next 12 months, and comprise the attenuated psychotic symptom (APS) criterion, the brief limited intermittent psychotic symptom (BLIPS) criterion, and the genetic risk and functional decline criterion. The basic symptom approach was developed to detect the risk for psychosis as early as possible as defined by the presence of the cognitive-perceptive basic symptoms (COPER) and the cognitive disturbances (COGDIS) criterion.

In the past two decades, with the increasing appreciation of the necessity for early intervention in psychosis, a number of treatments have been employed to delay or prevent the onset of psychosis in people at UHR for psychosis (McGorry et al. 2008). These treatments include antipsychotic medication, nutritional supplements such as omega-3 fatty acids and psycho-

logical treatment. A recent meta-analysis suggests that these interventions appear to be effective in delaying and even preventing the onset of psychosis (Stafford et al. 2013).

A case of an adolescent male with UHR psychotic symptoms is presented here with focus on challenges of assessing the UHR in adolescents and issues of providing effective age appropriate interventions acceptable to the patient.

### CASE REPORT

At the age of 13, the patient presented at the child and adolescent outpatient unit with intensive anxiety, insomnia, unexplained somatic symptoms, occasional depersonalization and derealization lasting for about three month. He had difficulty concentrating, his grades dropped significantly and he missed some school days. The patient continued to perform poorly and soon began to withdraw socially and emotionally. He viewed himself as „different“ from his peers and had occasional feelings that others are staring at him and commenting his behavior and appearance. He initiated less social interaction with peers and attained less interest, motivation, and pleasure in activities.

He lived with his parents and a younger sister. His grandmother had schizophrenia. Mental status examination revealed a tall adolescent who was appropriately dressed and cooperative for assessment. His affect was restricted. He denied pervasive feelings of sadness or hearing any voices. His functioning had grossly deteriorated within the past one month as he did not attend school and had no contact with peers.

He fulfilled the criteria for ultra-high risk for psychosis. The first three sessions involved assessment and psychoeducation regarding the symptoms of ultra-high risk psychotic state, its diagnosis, prognosis and available treatment modalities. A decision was made to engage the patient in a weekly CBT. Normalization through psychoeducation was an important component of the treatment. Also, a shared formulation helped to socialize the patient and his parents to the cognitive model while building insight into his confusing experiences. Activity scheduling and targeting some of the underlying assumptions and behaviors were used in combating social avoidance after the patient realized that social isolation potentially increased the attenuated psychotic phenomena. This was achieved through targeted behavioural exposures. After 20 sessions of CBT, decreases in cognitive-attentional impediments (inability to divide attention, slowed down thinking, thought pressure by thoughts unrelated to a common topic) and emotional withdrawal were observed along with improvements in sleep, volition, and academic functioning. Booster sessions were continued bimonthly for a year.

At the age of 15, when the patient entered high school, the decline in school, mood, and social functioning was exacerbated. His self image and confidence in his abilities deteriorated when he has got few low grades and after he overheard a colleague comment on his poor social skills. He viewed himself as weak and incapable. He subsequently became anxious and highly sensitive to the criticism of others. This impacted negatively on his school relationships and work. He became highly distressed and developed marked sleep disturbances, decreased concentration and attention, and diminished interest in activities. The patient also reported of feeling odd during which he would feel that other people are watching him and talking about him. He began missing classes and spent increasing time at home and alone. He also reported that these feelings would remain for few hours and make him feel extremely uncomfortable. With increasing time spent alone, the patient experienced an increase in symptoms because he became preoccupied with internally generated thoughts and emotions.

The patient was enrolled in an intensive treatment at the day hospital. The treatment included individual CBT sessions, group sessions, family therapy, occupational therapy and sociotherapy. Medication was not initiated at that time. His formulation began by linking precipitating stressors to underlying genetic and schematic vulnerabilities to the emergence of subthreshold psychotic symptoms. His parents were educated, working professionals who held high expectations of the patient. The patient strived to meet his parent's expectations and gain their approval. He developed the underlying belief „I must be perfect all the time“ and engaged in compensatory behavioral strategies, such as perfectionism and submissiveness. When he entered the new school, he

found it difficult to perform effectively. This triggered dysfunctional schema, such as „I am weak and incapable“. Negative affective states such as anxiety and ruminative self doubt compounded with limited sleep and social withdrawal, in a vulnerable individual precipitated the onset of subthreshold psychosis (cognitive-attentional impediments, overvalued ideas, suspiciousness).

The CBT sessions involved goal development, and exploration of his avoidance patterns and core beliefs. The psychoeducation component focussed on warning signs of relapse. The patient began cognitive restructuring by evaluating the evidence for and against the negative thoughts and beliefs. He generated more realistic thoughts and began searching for evidence that negated her distorted thinking of his weakness and incapability. Behavioral experiments were then implemented with graded difficulty wherein he could gain mastery and pleasure. The CBT also involved assertiveness training with in vivo role-plays in individual sessions first to provided a safe and structured environment, and later also in group sessions.

Again, the patient demonstrated a good clinical outcome after three months of intensive treatment. Tension and anxiety decreased and there were improvements in the interaction with peers and school work. He continued treatment in the outpatient setting with booster CBT sessions mainly focused on relapse prevention.

However, at the age of 17, in the last year of high school, during school trip that lasted for a week, he experienced strange and unusual perceptions, including seeing shadows and hearing his name called daily. This was the start of a gradual onset of subthreshold auditory hallucinations, which included hearing odd sounds, such as high-pitched echoes, beeping, and loud voices in the room. He was preoccupied again with thoughts that people are watching at him and talking about him, even following him. The overvalued ideas and perceptual abnormalities occurred weekly and were highly distressing, causing the patient to cover his ears to silence the sounds. He became highly anxious over his experiences and began withdrawing from friends and colleagues, and performing poorly at school.

Besides CBT, the patient was started on olanzapine 5 mg gradually increased to 20 mg/day which he tolerated well. His odd perceptions had significantly reduced and affective expressions improved after six weeks. His social and school functioning also improved. He was maintained on medication for a year and a half with follow up visits in the outpatient setting and booster CBT sessions. After discontinuation of medication subthreshold psychotic symptoms intensified (suspiciousness, hearing his name called daily and strange noises) and the medication was introduced again and continued. He graduated from high school successfully and entered university. At the age of 22, he engaged into emotional relationship with a girlfriend and continued playing football with his friends.

## DISCUSSION

This case indicates both the diagnosis and treatment challenges in working with adolescent population at high risk for developing psychosis. The prodromal period can last from several days to several years. In the early stages of the prodromal period, especially in children and adolescents, patients' presenting symptoms are usually not only less severe but also less specific (Arango 2011). It has been observed that these individuals present with a wider constellation of concerns such as perceptual difficulties, depression, anxiety, sleep disturbance and decline in functioning (Addington 2003). These kinds of symptoms and concerns may be more modifiable with psychotherapy than with medication (Hutton 2014).

CBT for those at clinical high risk for psychosis focuses on the subjective experience of psychosis and the collaborative understanding of that experience. Psychoeducation and normalization are used to help facilitate adjustment, particularly in young individuals (Addington et al. 2006). Hallucinations and delusions are placed on a continuum with normal beliefs, and perceptions are explored and understood in the context of the individual's social, cultural, and psychological world. Attenuated psychotic symptoms can be seen to mirror everyday concerns, such as fear of being excluded, unworthy, ridiculed, or harmed. The principal change strategies include generating, and evaluating alternative beliefs, safety behaviors, and metacognitive beliefs. The treatment strategies are selected within the context of a collaboratively derived formulation and related to the problems that are agreed upon and prioritized by the client.

The current evidence for the efficacy of psychological and pharmacological interventions in children and young adolescents is not sufficient to justify primarily preventive interventions (Schmidt et al. 2015). Psychological treatments might be most promising at earlier and less symptomatic stages of the prodrome. Antipsychotics might be quite effective in the later phases of the prodrome when psychotic symptoms are clearly evident and the individual is potentially on the cusp of a conversion to full-blown psychosis.

## CONCLUSION

Early intervention for psychosis has become an established clinical practice. Criteria have been established for identifying these young people who are at clinical high risk, and there have been studies evaluating both psychological and pharmacological treatments. These interventions appear to be effective in delaying and even

preventing the onset of psychosis. Perhaps different treatments, including both pharmacotherapy and psychotherapy, may be effective at different phases during the prodrome.

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Vlatka Boričević Maršanić made substantial contributions to conception and design of the paper, provided CBT and participated in revising it critically for important intellectual content.

Josipa Jukić and Mia Flander performed the literature review and wrote the first draft of the article.

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### Correspondence:

Assist. Prof. Vlatka Boričević Maršanić, MD, PhD  
Psychiatric Hospital for Children and Adolescents  
I. Kukuljevića 11, 10 000 Zagreb  
E-mail: vlatka.boricevic.marsanic@djecja-psihijatrija.hr