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# Autism with Severe Mental Retardation: a Therapeutic Challenge and Expert Opinion

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## Abstract

**Background:** Autism disorders which are also known pervasive developmental disorders as are very complex and heterogeneous group of chronic disorders that marked by early impairment in socialization, communication, and behavior. Atypical autism associated with severe mental retardation is more likely to be associated with significant hyperactivity and behavioral abnormalities, and thus this association intensifies the therapeutic challenge of autism disorders.

**Patients and methods:** The challenging case of a ten-year Iraqi boy who has autism disorder associated with severe mental retardation and markedly impaired behaviors is described, and expert opinion is presented.

**Results:** A ten-year Iraqi boy was seen because of markedly impaired communication, very poor cognitive abilities, no speech development, and severe behavioral abnormalities. He was not responding to name and had no eye contact. He was markedly hyperactive and was displaying repetitive abnormal movements and behaviors. He was not saying any word, not understanding simple commands, and had very poor behaviors and was defecating in place in home and in the street. The boy in this paper was initially treated based on our extensive published experiences with treatment of autism disorders and mental retardation.

**Conclusion:** Treatment of children with atypical autism associated with severe mental retardation represents a therapeutic challenge and demands the judicious uses of multiple therapies including intramuscular cerebrolysin and piracetam, typical and atypical neuroleptics and baclofen.

**Keywords:** Atypical autism; Mental retardation; Therapeutic challenge; Expert opinion

## Introduction

Autism disorders which are also known pervasive developmental disorders as are very complex and heterogeneous group of chronic disorders that marked by early impairment in socialization, communication, and behavior. Autism disorders were first recognized by Grunya Efimovna Sukhareva (Figure-1A), a Soviet pediatric psychiatrist in 1925, and she called these disorders autistic psychopathy. The characteristic and diagnostic manifestations of autism disorders result from impairments in social

interaction and communication. The impaired social interaction causes the two major diagnostic features of autism which are the lack of eye contact, and the lack of appropriate responsiveness to own name. Difficulties in using and understanding language are an important feature of autism disorders. Repetitive body movements or behavior patterns including hand flapping, foot tapping, and spinning are commonly associated with autism disorders (Figure-1A).





**Figure 1A:** Grunya Efimovna Sukhareva, a Soviet pediatric psychiatrist.

The Autistic disorder which is called classical autism was first described by Leo Kanner (Figure-1B) in 1943. The diagnostic feature of this type is normal or high intelligence(Figure-1B).

Children with Autism disorder who have subnormal intelligence, but without significant mental retardation are considered to have typical autism. The absence of significant mental retardation in

such children is suggested by having acceptable adaptive behaviors including eating with spoon, bowel control and going to bathroom. In children with typical autism disorder, the serious lack of communication skills per se is expected to prevent or delay the acquisition of developmental mile stones. Asperger syndrome was first described by Grunya Efimovna Sukhareva, and later by Hans Asperger (Figure-1C) in 1944.



**Figure 1B:** Leo Kanner.



**Figure 1C:** Hans Asperger.

Atypical autism associated with severe mental retardation is more likely to be associated with significant hyperactivity and behavioral abnormalities, and thus this association intensifies the therapeutic challenge of autism disorders [1-8].

## Patients and Methods

The challenging case of a ten-year Iraqi boy who has autism disorder associated with severe mental retardation and markedly impaired behaviors is described, and expert opinion is presented.

## Results



**Figure 2A:** The boy was markedly hyperactive and was displaying repetitive abnormal movements and behaviors.



**Figure 2B:** The boy was markedly hyperactive and was displaying repetitive abnormal movements and behaviors.

A ten-year Iraqi boy was seen because of markedly impaired communication, very poor cognitive abilities, no speech development, and severe behavioral abnormalities. He was not responding to name and had no eye contact. He was markedly hyperactive and was displaying repetitive abnormal movements and behaviors (Figure-2).

He was not saying any word, not understanding simple

commands, and had very poor behaviors and was defecating in place in home and in the street. The boy in this paper was initially treated based on our extensive published experiences with treatment of autism disorders and mental retardation [9-16]. Treatment included (Table-1) courses of intramuscular cerebrolysin, low dose typical and atypical neuroleptics including prochlorperazine and risperidone, and baclofen.

**Table 1:** Initial treatment plan.

FIRST MONTH
Intramuscular cerebrolysin: 5ml daily for ten days, 5ml every other day for 20 days.
Oral prochlorperazine 5 mg in the morning.
Oral risperidone 2 mg at night.
Oral Baclofen 10 mg at 1pm.

SECOND MONTH
Intramuscular cerebrolysin: 5ml every third day for 30 days (10 doses).
Intramuscular piracetam: 1g every third day for 30 days (10 doses) [Not given on the same day of cerebrolysin].
Oral prochlorperazine 5 mg in the morning.
Oral risperidone 2 mg at night.
Oral Baclofen 10 mg at 1pm.

## Discussion

Atypical autism associated with severe mental retardation is more likely to be associated with significant hyperactivity and behavioral abnormalities, and thus this association intensifies the therapeutic challenge of autism disorders [1-8]. This boy in this paper was initially treated based on our extensive published experiences with treatment of autism disorders and mental retardation [9-16]. Treatment included (Table-1) courses of intramuscular cerebrolysin, low dose typical and atypical neuroleptics including prochlorperazine and risperidone, and baclofen (Table-1).

Cerebrolysin, a safe parenteral mixture of aminoacids which has been used with a benefit in a variety of childhood neuropsychiatric disorders, is the only medical therapy that is known to be associated with significant improvement and even cure of the major autistic features (Poor response to name and poor eye contact which indicate impaired communication) [9-15]. McCracken et al (2002) [16] reported a placebo controlled, double-blind study of the use of risperidone in the treatment of 101 children (82 boys and 19 girls) aged 5 to 17 years, having autism disorder associated with severe tantrums, aggression, or self-injurious behavior. The study found that risperidone was beneficial for the treatment of tantrums, aggression, or self-injurious behavior in children, and was well tolerated [17]. The available research evidence suggests that baclofen, a selective agonist for GABA<sub>B</sub> receptors can contribute to the impaired function of the GABAergic system in autism disorders and its use with risperidone has been suggested [18]. Parenteral piracetam has been used safely and with a benefit in a variety of childhood neuropsychiatric disorders, and it is one of the most important medications that have been used with benefit in mental and developmental retardation of various types and etiologies [16,19-23].

## Conclusion

Treatment of children with atypical autism associated with severe mental retardation represents a therapeutic challenge and demands the judicious uses of multiple therapies including intramuscular cerebrolysin and piracetam, typical and atypical neuroleptics and baclofen.

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## Conflict of Interest

None.

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