

# **A girl from Pakistan with atypical autism: Expert opinion and a therapeutic recommendation**

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**Received Date:** 10 November 2022 **Accepted Date:** 30 November 2022 **Published Date:** 30 December 2022.

**Citation:** Aamir Jalal Al-Mosawi, (2022). A girl from Pakistan with atypical autism: Expert opinion and a therapeutic recommendation. Journal of Clinical Case Reports and Trails. 1(2).

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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 case of a girl with atypical autism disorder associated with cognitive impairment is described, and expert opinion is presented.

**Results:** Early during October, 2022, the mother of 4 years and 10 months girl consulted us about the possible therapies for her girl who had the two major diagnostic features of autism (Poor response to own name and very poor eye contact. The girl was not interacting with anyone, and her speech was not developed. She also had repetitive movements mostly in the form of moving back and forth walk and some tapping of fingers with each other. Her motor development was acceptable, but she had poor understanding of commands and poor adaptive behaviors. The girl in this paper received the diagnosis of atypical autism with mental retardation, and was initially treated based on our extensive published experiences with treatment of autism disorders associated with cognitive impairment.

**Conclusion:** The current expert opinion suggests treatment of children with atypical autism associated with mental retardation represents a therapeutic challenge and demands the judicious uses of several therapies including intramuscular cerebrolysin, piracetam, neuroleptics, The addition of baclofen has been suggested in the treatment of atypical associated with marked hyperactivity.

**Keywords:** Atypical autism, mental retardation, 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.



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

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.

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: Leo Kanner**

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 milestones.

Asperger syndrome was first described by Grunya Efimovna Sukhareva, and later by Hans Asperger (Figure-1C) in 1944 [1-8]



**Figure-1C: Hans Asperger**

**Patients and methods:** The case of a girl with atypical autism disorder associated with cognitive impairment is described, and expert opinion is presented.

**Results**

Early during October, 2022, the mother of a 4-year and 10 months girl consulted us about the possible therapies for her girl, who had the two major diagnostic features of autism (Poor response to own name and very poor eye contact).

The mother described her daughter as not interacting with anyone and was living in her own world. Most of the time, the girl was not responding to name or turning toward who is saying her and had very poor eye contact (Figure-2A).



**Figure-2A: The father was saying her name repeatedly, but she was not responding and not turning toward him to look at him.**

Her speech was not developed and she was not saying any words, but she was very rarely repeating words said by parents.

She also had repetitive movements mostly in the form of moving back and forth and some tapping of fingers with each other.

Her motor development was acceptable as shown by

her ability to ride a bicycle (Figure- 2B). However, she had poor understanding of commands and poor adaptive behaviors as it was not much possible to train her for toilet and feeding with spoon. She could only eat banana and apple on her own and was unable to unwrap biscuits or candies.



**Figure-2B:**

**The girl's motor development was acceptable as shown by her ability to ride a bicycle**

She could not copy a line or a circle, but has recently

started holding a pencil but without looking towards the drawing paper (Figure-2C).



**Figure-2C:**

**The girl could not copy a line or a circle, but has recently started holding a pencil but without looking**

**towards the drawing paper**

In addition, she generally lacks the understanding or identification of danger.

Brain MRI, EEG and hearing test were all normal.

The girl in this paper received the diagnosis of atypical autism with mental retardation, and was initially treated based on our extensive published experiences with treatment of autism disorders and cognitive impairment [9-17].

The initial 2-month recommended therapies included courses of intramuscular cerebrolysin, oral piracetam, and oral risperidone:

1-Intramuscular cerebrolysin: 3 ml given every third day during the day, preferably in the morning (20 doses over two months).

2-Oral piracetam 800 mg given in the morning daily before breakfast for two months.

3-Oral risperidone 0.5 mg once at night and can be increased to 1 mg if hyperactivity persists.

### **Discussion**

Atypical autism associated with 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 girl in this paper was initially treated based on our extensive published experiences with treatment of autism disorders associated with mental retardation [9-17]. Treatment included intramuscular cerebrolysin, piracetam, and risperidone, an atypical neuroleptic.

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]. Piracetam beneficial effects on impaired cerebral functions include improving neuronal and cognitive functions, increasing cerebral blood flow and oxygen consumption, improving neurotransmitters function and brain neurotransmission. Piracetam is not associated with important side effect nor has acute toxicity at the

therapeutic doses. Piracetam has been used with important benefits in the treatment of cerebral palsy and other childhood neuro-psychiatric disorders [18, 19].

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 [17, 20-25].

McCracken et al (2002) 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 [26].

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 [27].

### **Conclusion**

The current expert opinion suggests treatment of children with atypical autism associated with mental retardation represents a therapeutic challenge and demands the judicious uses of several therapies including intramuscular cerebrolysin, piracetam, neuroleptics, The addition of baclofen has been suggested in the treatment of atypical associated with marked hyperactivity.

### **Acknowledgement**

Some of the figures in this paper were included in previous author's publications, but the author has their copyrights.

The author would like to express his gratitude for the parents who willingly accepted publishing the photos of their child.

**Conflict of interest:** None.

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