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International Journal of Genetics and Genomic Science
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ISSN:2836-2306 RESEARCH ARTICLE

Atypical autism: Cure of the major autistic features and the need for cognitive improvement and rehabilitation

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Received Date: 23 August 2022; **Accepted Date:** 09 September 2022; **Published date:** 24 November 2022.

Citation: Aamir Jalal Al-Mosawi (2022). Atypical autism: Cure of the major autistic features and the need for cognitive improvement and rehabilitation. International Journal of Genetics and Genomic Science .1(1).

Abstract

Background

We have previously reported our extensive experiences with autism disorders and their treatments, and we showed the possibility of curing the major autistic features with a new therapeutic approach which included individualized courses of intramuscular cerebrolysin as the main therapy for the main autistic features. Our previously published experiences included demonstrating the cure of autism in two brothers with autosomal recessive disorder. We emphasized that cure of autism in older children has never been expected to totally normalize them, as the patients have already lost several years of learning, social adaptation, and maturation of personality and behavior. In addition, patients with atypical autism associated with some degree of mental retardation need further interventions to improve their cognitive abilities.

Patients and methods: *Our previously published experiences included demonstrating the cure of autism in two brothers with autosomal recessive disorder. We emphasized that cure of autism in older children has never been expected to totally normalize them, as the patients have already lost several years of learning, social adaptation, and maturation of personality and behavior. In addition, patients with atypical autism associated with some degree of mental retardation need further interventions to improve their cognitive abilities. This paper reports further treatments received the older of two brothers with autosomal recessive autism who were reported to achieve cure of the major autistic features.*

Results: *After eighth months of treatment, the boy experienced significant improvements in cognitive functions, as he was understanding and responding to simple commands well.*

Conclusion: *Cure of autism has been achieved in two boys with autosomal recessive disorder. However, cure of autism in older children has never been expected to totally normalizes them, as the patients have already lost several years of learning, social adaptation, and maturation of personality and behavior.*

Keywords: *atypical autism, autosomal recessive, cure, cognition.*

Introduction

Autistic disorders which are also called “Pervasive developmental disorders” are a very complex and heterogeneous group of disorders characterized by early impairments in social interaction and communication and behavioral problems which are clinically dominated by the main autistic feature which include poor or no eye contact, poor or no response to name, and poor or no speech development. However, patients with Asperger syndrome have good speech development. A child with acceptable eye contact and acceptable response to name cannot receive the diagnosis of an autism disorder [1-10].

We have previously reported our extensive experiences with autism disorders and their treatment, and we showed the possibility of curing the major autistic features with a new therapeutic approach which included individualized courses of intramuscular cerebrolysin as the main therapy for the main autistic features. Courses of intramuscular cerebrolysin were individualized according to the age and severity of the illness, and with aim of improving social interactions including response to name, looking at faces, and eye contact.

It was speculated that improvements in social interaction can contribute to improving other features of autism, especially verbal communication and speech.

Many patients with autism disorders need neuroleptics to control hyperactivity, anxiety and other abnormal behaviors. Trifluoperazine and prochloperazine were used frequently. Risperidone was also used in patients with severe disorder. Some patients also receive citicoline as an adjunctive therapy to improve speech development and cognitive functions, and piracetam can also be given to improve cognitive functions in atypical autism with mental retardation [11, 12, 13].

Patients and methods

Our previously published experiences included demonstrating the cure of autism in two brothers with autosomal recessive disorder. We emphasized that cure of autism in older children has never been expected to totally normalize them, as the patients have already lost several years of learning, social adaptation, and maturation of personality and behavior. In addition, patients with atypical autism associated with some degree of mental retardation need further interventions to improve their cognitive abilities [14].

This paper reports further treatments received the older of two brothers with autosomal recessive autism who were reported to achieve cure of the major autistic features [14].

Results

The boy was first seen on the 22nd of August, 2019, at the age of eleven years. He had severe disorder with no eye contact and was not responding to name, and had displayed significant repetitive movements at the clinic (Figure-1). He was not saying any word, was still unable to control bowel nor was able to eat with a spoon. Table-1 shows the treatments of the boy which were described in an earlier publication [14].

***Fig 1*:** The boy had severe disorder with no eye contact and was not responding to name, and had displayed significant repetitive movements at the clinic

After the treatments in table-1, the boy showed neither autistic features nor repetitive behaviors, and experienced significant improvements cognitive functions. The boy was obeying commands and accepting shaking hands (Figure-2), but was still saying only few words occasionally, and was unable to answer when asked “What is your name”. He also achieved bowel control and spoon feeding [14].

However, cure of autism at his age has never been expected to totally normalize him, as he has already lost several years of learning, social adaptation, and maturation of personality and behavior. Therefore, further treatments were prescribed with aim of improving his cognitive abilities, and behavior as his

mental age was estimated to be at or below three years. The family was most concerned about his abnormal behaviors that included breaking things and escaping for the house

Table 1:The treatments of the boy which were described in an earlier publication [14]

First month
Intramuscular cerebrolysin 5 ml daily for 10 days. *Intramuscular cerebrolysin 5 ml every other day, 10 doses (20 days).Oral trifluoperazine 1mg daily in the morning.* *Oral prochloperazine 5 mg in the afternoon.*
Second and third months
Intramuscular cerebrolysin 5 ml every third day, 20 doses (60 days).Oral trifluoperazine 1mg daily in the morning. *Oral prochloperazine 5 mg in the afternoon.* *Risperidone 1 mg at night.*
Fourth , fifth and sixth months
Intramuscular cerebrolysin 5 ml every third day, 30 doses (90 days).Oral trifluoperazine 1mg daily in the morning. *Oral prochloperazine 5 mg in the afternoon*.
Seventh month
Intramuscular cerebrolysin 5 ml every third day, 20 doses (60 days).Oral trifluoperazine 1mg daily in the morning. *Oral prochloperazine 5 mg in the afternoon.* *Oral piracetam 800 mg once daily in the morning.*
Eighth month
Intramuscular cerebrolysin 5 ml every third day, 20 doses (60 days).Oral trifluoperazine 1mg daily in the morning. *Oral prochloperazine 5 mg in the afternoon.* *Oral piracetam 800 mg once daily in the morning.Citicoline 300 mg once daily in the morning.*

***Fig 2*:** After eighth months of treatment, the boy experienced significant improvements in cognitive functions, as he was understanding and responding to simple commands well. He sat when the mother asked him to sit

Discussion

In this paper, cure of autism was achieved in two brothers with autosomal recessive autism treated with courses of intramuscular cerebrolysin which was used with other adjunctive therapies including neuroleptics (Trifluoperazine, prochloperazine, and risperidone), citicoline, and piracetam.

Cerebrolysin solution contains free amino acids (85%) and 15% biologically active low molecular weight amino acids including neuro-peptides (Brain-derived neurotrophic factor, glial cell line-derived neurotrophic factor, nerve growth factor, ciliary neurotrophic factor [15]. Cerebrolysin has been used safely with benefit in a variety of neuro-psychiatric disorders including idiopathic mental retardation [16, 17], cerebral palsy [18, 19], myelomeningocele [20], pediatric juvenile spinal muscular atrophy [21, 22], pediatric Charcot Marie Tooth disease [23, 24], kernicterus [25, 26], agenesis of corpus callosum with colpocephaly [27, 28].

Citicoline, which has been increasingly grouped with the water-soluble B vitamins, and is regarded as a form of the essential nutrient choline. It has been increasingly used with noticeable benefits in the treatment of several pediatric neuro-psychiatric disorders including, pervasive developmental disorders including Rett syndrome, and kernicterus [20, 30].

Piracetam beneficial effects on impaired cerebral functions include improving neuronal and cognitive functions, increasing cerebral blood flow and oxygen consumption, improving neurotransmitter's 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 [31, 32].

The occurrence of autosomal recessive cases of autism has been reported as early as 1985[33]. In 1988, Smalley et al. emphasized the genetic heterogeneity of autism disorders and their association with mental retardation, and the occurrence of autosomal recessive inheritance [34].

Conclusion

Cure of autism has been achieved in two boys with autosomal recessive disorder. However, cure of autism in older children has never been expected to totally normalizes them, as the patients have already lost several years of learning, social adaptation, and maturation of personality and behavior.

Acknowledgement

The author is grateful for the parents for willing accepting publishing the photos of their children.

Conflict of interest

None.

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