

## **Our Experience with Childhood Pervasive Developmental Disorders (Autism and Asperger Syndrome): Cure is Possible**

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### **Abstract**

**Background:** Until, 2016, there have been no consultation nor medical treatment services for children with pervasive developmental disorders and other childhood psychiatric disorders in Iraq. However, early during the year 2017, a pediatric psychiatry consultation clinic was established at the children Teaching Hospital of Baghdad Medical City with aim of providing evidence-based consultations and evidence-based medical therapies and also conduction a pediatric psychiatry training courses. Many of the scientific practices and disease patterns were documented earlier through scientific publishing. The aim of this paper is to describe new experiences with pervasive developmental disorders.

**Materials and Methods:** During six months period (from June,2019 to November,2019) forty-six new patients (38 males and eight females) with pervasive developmental disorders were observed at the Children Teaching Hospitals of Baghdad Medical City. Their ages ranged from 2 years to 11 years. During this period, eight patients (4 boys and 4 girls) with pervasive developmental disorders whom were included in our previous publications, but their follow up was not complete, are also presented. All patients received individualized courses of intramuscular cerebrolisin as the main therapy for the main autistic features (Impaired social interaction and communication dominated by the lack of response to their name and poor eye contact).

**Results:** Twenty-four patients (52%) including 20 boys and 4 girls received a diagnosis of typical autism. Seventeen patients (37%) including 14 boys and 3 girls received a diagnosis of atypical autism. Four patients including three boys and one girl (8.7%) received the diagnosis of Asperger syndrome with acceptable language development by definition. One boy was considered to have pervasive developmental disorder otherwise not specified. All the patients experienced some improvement during follow-up. It was possible to document complete disappearance of the main autistic features (Impaired social interaction and communication dominated by the lack of response to their name and poor eye contact) in two patients.

Eight patients (4 boys and 4 girls whom were included in our previous publications [1,4], but their follow up was not complete, were also observed. They were treated with individualized treatment courses including intramuscular cerebrolisin. After treatment, all patients experienced complete disappearance of the main autistic features and improvement in speech.

**Conclusion:** In this paper, a well-documented complete disappearances of autistic features with treatment with individualized courses of intramuscular is reported in nine children with autism and one child with Asperger syndrome.

This paper demonstrated that a cure for autism and Asperger syndrome is possible.

**Keywords:** Autism; Asperger Syndrome; Cerebrolisin; Cure

### Introduction

Until, 2016, there have been no consultation nor medical treatment services for children with pervasive developmental disorders and other childhood psychiatric disorders in Iraq. However, early during the year 2017, a pediatric psychiatry consultation clinic was established at the children Teaching Hospital of Baghdad Medical City with aim of providing evidence-based consultations and evidence-based medical therapies and also conduction a pediatric psychiatry training courses. Many of the scientific practices and disease patterns were documented earlier through scientific publishing [1-13]. The patterns of pervasive developmental disorders and mental retardation in Iraqi children have been determined [4,5,6,9,11]. The occurrence of pediatric psychiatric disorders that have not been documented in Iraqi children has been reported. These disorders include Rett syndrome, Heller syndrome, regressive autism, and Gilles de La Tourette syndrome [2,3,6,10,12]. The content of pediatric psychiatry courses has also been scientifically documented [13]. The use of innovative evidence-based medical therapies with obvious benefits in pervasive developmental disorders and mental retardation has been documented [1,2,4,7,8]. The work at the pediatric psychiatric clinic provided evidence that a cure from pervasive developmental disorders including autism and Asperger syndrome is possible.

### Aim of the Study

The aim of this paper is to describe new experiences with pervasive developmental disorders.

### Materials and Methods

During six months period (from June, 2019 to November, 2019) forty-six new patients (38 males and eight females) with pervasive developmental disorders were observed at the Children Teaching Hospitals of Baghdad Medical City. Their ages ranged from 2 years to 11 years. During this period, eight patients (4 boys and 4 girls) with pervasive developmental disorders whom were included in our previous publications, but their follow up was not complete, are also presented.

### Results

Twenty-four patients (52%) including 20 boys and 4 girls received a diagnosis of typical autism based on the lack of obvious evidence of mental retardation and acceptable adaptive behaviors including bowel control and good spoon feeding. Four of the 21 patients with typical autism including three boys and one girl were considered to have classic autism (Kanner syndrome) as it was possible to demonstrate that they had good intelligence. Two male patients in this group had significant echolalia including one of the patients with classic autism (Kanner syndrome) and one boy with classic autism (Kanner syndrome) had Occasional echolalia. One boy had significant aggressive behavior and was frequently beating his mother. One boy had spastic cerebral palsy and was having difficulties in standing and walking (Figure 1). A girl in this group had brain MRI which showed normal findings, and a boy with classic autism (Kanner syndrome) had brain CT-scan which also showed normal findings.

Seventeen patients (37%) including 14 boys and 3 girls received a diagnosis of atypical autism based on evidence of mental retardation indicated by poor and late development of adaptive behaviors including bowel control and good spoon feeding. In one girl, atypical autism was secondary to phenylketonuria. Four patients were brothers each two of them from two unrelated families. Significant behavioral abnormalities including biting others including sibling was observed in three boys, one of them also had gait abnormalities attributed to birth asphyxia and his CT-scan showed evidence of slight brain atrophy with mild dilatation of the ventricular system. Figure 2 shows an eight year old boy with severe atypical autism associated with significant behavioral abnormalities including biting his sister, at the clinic he displayed significant repetitive movements.

Four patients including three boys and one girl (8.7%) received the diagnosis of Asperger syndrome with acceptable language development by definition.



**Figure 1:** One of the patients with typical autism was boy who had spastic cerebral palsy and was having difficulties in standing and walking.



**Figure 2:** An eight year old boy with severe atypical autism associated with significant behavioral abnormalities including biting his sister, at the clinic he displayed significant repetitive movements.

One boy was considered to have pervasive developmental disorder otherwise not specified because despite impaired social interaction and communication dominated his disorder, he lacked the typical features of poor eye contact and non-response to his name.

The patients were treated with evidence-based innovative therapies based on our published experiences [1-3].

All patients received individualized courses of intramuscular cerebrolysin as the main therapy for the main autistic features (Impaired social interaction and communication dominated by the lack of response to their name and poor eye contact). Twenty six (66.6%) patients received neuroleptic to control significant over activity and other behavioral abnormalities; six of them required triple neuroleptics therapy (Trifluoperazine, prochlorperazine, risperidone), thirteen patients received two neuroleptics (Trifluoperazine and prochlorperazine), five patients received only trifluoperazine, prochlorperazine, and two patients received only prochlorperazine). Three patients received oral citicoline during the follow-up period with the aim of initiation or improving speech.

All the patients experienced some improvement during follow-up. It was possible to document complete disappearance of the main autistic features (Impaired social interaction and communication dominated by the lack of response to their name and poor eye contact) in two patients.

The first patient a five-year old boy with typical autism who was first seen during June 2019. He had poor language development and impaired social interaction and communication dominated by the lack of response to his name and poor eye contact. He received three courses of intramuscular cerebrolysin over three months period. In the first course, he received cerebrolysin 3 ml every other day (10 doses). In the second course, he received cerebrolysin 5 ml every other day (10 doses). In the third course, he received cerebrolysin 5 ml every other third (10 doses). During the three courses, he was also receiving trifluoperazine 1 mg at night.

Treatment was started on 20<sup>th</sup> of June, 2019, when the boy was seen after completing the three treatment courses on the 19<sup>th</sup> of September, he didn't have the main autistic features as he responding to name, greeting and talking with doctor with good eye contact, and with obvious improvement in his speech.

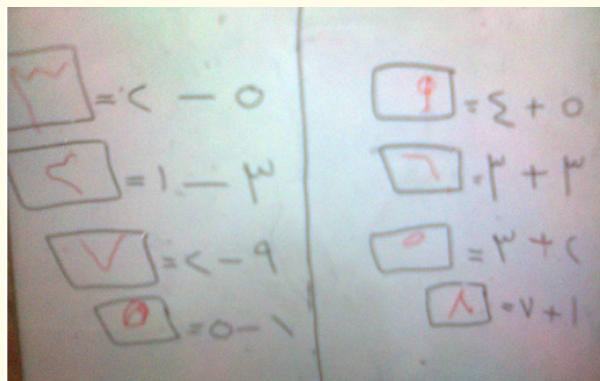
The second patient a seven-year old boy with classic autism (Kanner syndrome) who was first seen during August 2019. He had poor language development and impaired social interaction and communication dominated by the lack of response to his name and poor eye contact. He had prominent repetitive movements also. He had very good adaptive skills and the mother demonstrated that he has no cognitive impairment as he write could words and solve simple math problems (Figure 3A and 3B). Table 1 shows the two courses of treatment received by the boy over 50 days.

After treatment, the boy had acceptable social interaction and communication with improved speech. He was normally responding to his name and had good eye contact. He accepted the doctor request to take a pen to write something without the need for the help of mother and he easily accepted to take photo with the doctor. He also waved goodbye in response to the doctor (Figure 3C).



**Figure 3A:** The second patient who experienced complete disappearance of the main autistic features had impaired social interaction and communication dominated by the lack of response to his name and poor eye contact. The mother demonstrated that he has no cognitive impairment as he write could words and solve simple math problems.





**Figure 3B:** The second patient who experienced complete disappearance of the main autistic features had impaired social interaction and communication dominated by the lack of response to his name and poor eye contact. The mother demonstrated that he has no cognitive impairment as he write could words and solve simple math problems.



**Figure 3C:** After treatment, the boy had acceptable social interaction and communication. He accepted the doctor request to take a pen to write something without the need for the help of mother and he easily accepted to take photo with the doctor. He also waved goodbye in response to the doctor.

First course
1- Intramuscular cerebrolysin 5 ml every other day (10 doses).
2- Trifluoperazine 1 mg in the morning.
3- Prochlorperazine 2.5 mg in the afternoon.
Second course
1- Intramuscular cerebrolysin 5 ml every third day (10 doses over 30 days).
2- Trifluoperazine 1 mg in the morning.
3- Prochlorperazine 5 mg in the afternoon.
4- Oral citicoline 3 ml (275 mg) in the morning.

**Table 1:** Courses of treatment received by the second patient who experienced complete disappearance of the main autistic features.

During this six-month period, eight patients (4 boys and 4 girls) with pervasive developmental disorders whom were included in our previous publications [1,4], but their follow up was not complete, were also observed. Seven of the patients had typical autism while one boy had Asperger syndrome. They had poor social interaction dominated by not responding to their names, poor eye contact, and poor communication with poor speech development. The boy with Asperger syndrome had by definition an acceptable speech. They were treated with individualized treatment courses including intramuscular cerebrolysin, oral neuroleptics and variable courses of oral and intramuscular citicoline.

After treatment, all patients experienced complete disappearance of the main autistic features and improvement in speech. They had acceptable social communication with normal response to own name and to doctors requests and had good eye contacts. All accepted the doctor’s request to take photo (Figure 4).



**Figure 4:** Patients with pervasive developmental disorders whom were included in our previous publications, but their follow up was not complete, and experienced complete disappearance of the main autistic features and improvement in speech. They had acceptable social communication with normal response to own name and to doctors requests and had good eye contacts. All accepted the doctor’s request to take photo.

### Discussion

We have previously suggested the possibility of cure from pervasive developmental disorders including Autism and Asperger syndrome with use of individualized courses of intramuscular cerebrolysin as the main therapy for the main autistic features (Impaired social interaction and communication dominated by the lack of response to their name and poor eye contact) [1,2,3,7].

Cerebrolysin is a mixture of free amino acids (85%) and 15% biologically active low molecular weight amino acid sequences which include low molecular weight neuro-peptides (Brain-derived neurotrophic factor, glial cell line-derived neurotrophic factor, nerve growth factor, ciliary neurotrophic factor [1,2,4,7].

Cerebrolysin has been used safely with benefit in a variety of neuro-psychiatric disorders including idiopathic mental retardation [8], cerebral palsy [14-16], brain atrophy [17], myelomeningocele [18], pediatric juvenile spinal muscular atrophy [19], pediatric Charcot Marie Tooth disease [20], kernicterus [21], agenesis of corpus callosum with colpocephaly [22].

In this paper, a well documented complete disappearances of autistic features with treatment with individualized courses of intramuscular is reported in nine children with autism and one child with Asperger syndrome.

### Conclusion

This paper demonstrated that a cure for autism and Asperger syndrome is possible.

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