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THE ASLAVITAL TREATMENT IN THE RECOVERY OF MENTALLY-DEFICIENT CHILDREN*

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Summary. This research was conducted on 44 school children, males aged 7 to 14, with the diagnosis of slight or moderate mental deficiency. The double-blind technique was used; thus 23 subjects were treated with Aslavital and 21 subjects received injections with Placebo (physiological serum). All the subjects received i.m. equal amounts of solution (4 ml) according to the same schedule (6 days per week); each subject thus received 75 injections. The psychological examination included tests aimed at assessing level, memory, attention, motor activity. The psychological tests prior to the treatment did not reveal significant differences between the two groups. The tests subsequent to the Aslavital treatment pointed out obvious improvements both in the dynamics of the intellectual activity and its projection on the motor plan. The teachers noticed better school results with the children belonging to this group. The children in the Placebo group did not show significant changes as compared to the initial tests.

Aslavital improves the metabolism of the nervous cell and stimulates the trophic functions of the central nervous system [1].

Due to its properties, Ana Aslan started to use the Aslavital therapy not only in geriatrics, but for improving the psychic state of mentally deficient children.

A study was thus conducted in order to assess the efficacy of the Aslavital therapy under the above-mentioned circumstances; it included two stages: a screening research and a double-blind study.

During the first stage, the research consisted in the comparative analysis of the results obtained with a group of children both before and after the Aslavital treatment.

The study was conducted on a group of 34 children, from a school for mentally deficient children, boys and girls aged 8 to 12 whose main diagnosis was slight and moderate mental deficiency.

Aslavital was administered as pills, 2 per day in 24 day-series, with 10 days breaks between the series, over a period of 6 months.

The research consisted in the investigation of mental deficiency, attention, memory, psychopedagogical level and behaviour. Clinical and neurological examinations were also performed.

The results pointed out the improvement of the psychological tests after the Aslavital treatment.

* Research carried on in collaboration with the School for mentally deficient children no. 6.

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The teachers noticed significant changes such as conscious realisation of school activities, assessment of will in interschool relations, development of initiative, sociability and better school results in children who initially showed apathy, slowliness, superficial inhibition, inertia, passivity, tendency to isolate from the class.

Due to the results of the screening research, the action of Aslavital on mentally deficient children was further investigated in a double-blind study.

MATERIAL AND METHOD

This study was conducted on a group of 44 boys from a school for mentally deficient children, aged 7 to 14 with the diagnosis of slight or moderate mental deficiency.

The diagnosis, the etiology and the socio-cultural environment to which the subjects belonged were taken into consideration in selecting the cases. The encephalopathic sequelae, obstetrical cranio-cerebral traumatisms, psycho-somatic underdevelopment, ethylic or mentally deficient parents were prevalent in the etiology of the investigated subjects.

The following peculiarities of the family environment were prevalent in most of the subjects:

— disorganized family;
— conflicts between the parents;
— inadequate hygienic, cultural and instructive conditions;
— behaviour disturbances in the parents.

The Raven-coloured progressive matrices were used for the psychologic examination of the mental level. The research was conducted on the children whose IQ ranged from 0.44 to 0.70 [2].

The clinical neuropsychiatric examination was also performed.

The children of the two groups subjected to the double-blind study had similar ages and IQ's.

The following aspects made the object of the psychological examination:

a) memory, using the number-memory test from WISC [3];

b) attention, using the double-checking test (A.d.c.) by R. Zazzo [4];

c) motor style and level with R. Zazzo's tests for the child's psychological examination [4];

— circle outline (C.O.n.s.m.)
— circle cutting (C.C.n.s.m.)
— tapping lines (T.L.n.s.m.).

The major objectives of the psychological examination were the various aspects of the subjects' personality [5, 6].

Consequently, the tests used pointed out the dynamics of the intellectual activity, perception, thought and their projection on the motor plane through the assessment of the coordination of movements, manual ability, speed.

All the psychological tests were applied both before (day 0) and after the treatment (day 75).

The research was conducted during the school year, the children being permanently supervised by the medical staff and the teachers.

Similar amounts of solution (4 ml) were injected i.m. to all the subjects following an identical schedule (daily, 6 days per week). Each subject received thus 75 shots, because the treatment was not administered during the holidays.

The subjects' tolerance to Aslavital was tested in the first place.

The Aslavital treated group counted 23 subjects; whereas that receiving Placebo (physiological serum) counted 21 subjects.

RESULTS

The statistic analysis (test t) of the results of the psychological examination before the treatment pointed out the equivalence of all the psychological tests in both groups (Table 1).

Table 1

Statistic comparison of the psychological tests of the two groups prior to treatment

Tests	Aslavital	Placebo	Statistic significance
N.M.	3.60	3.61	N.S.
	2.56	2.76	N.S.
A.d.c.	0.15	0.16	N.S.
	0.67	0.51	N.S.
C.O.m.l.s.	29.82	38.70	N.S.
C.C.m.l.s.	2.43	2.04	N.S.
	1.43	1.04	N.S.
T.L.m.l.s.	199.21	188.14	N.S.

Abbreviations:

N.M. = number-memory
A.d.c. = attention, double-checking
C.O.m.l.s = circle outline — motor level and style
C.C.m.l.s.: = circle cutting — motor level and style
T.L.m.l.s = tapping lines — motor level and style

No significant modification of the measured variables (A.d.c., N.M., C.O., C.C., T.L.) with the Placebo group was revealed by the statistic analysis (Table 2).

Table 2

Comparative data of the psychological tests prior and consequent to the placebo

Tests	Before Placebo		After Placebo		
	m.	d.c.	m.	d.c.	
N.M.	3.61	0.11	3.76	0.11	N.S.
	2.76	0.12	2.90	0.09	N.S.
A.d.c.	0.16	0.05	0.07	0.02	N.S.
	0.51	0.07	0.42	0.07	N.S.
C.O.m.l.s.	38.70	6.19	34.47	7.58	N.S.
C.C.m.l.s.	0.43	0.12	0.52	0.10	N.S.
	2.04	0.22	1.80	0.18	N.S.
	1.04	0.15	1.09	0.14	N.S.
T.L.m.l.s.	188.14	13.33	179.95	11.11	N.S.

Abbreviations:

N.M. = number-memory
A.d.c. = attention, double-checking
C.O.m.l.s. = circle ouline — motor level and style
C.C.m.l.s. = circle cutting — motor level and style
T.L.m.l.s. = tapping lines — motor level and style

After the individual interpretation of the results of the psychological tests prior and subsequent to the treatment, the results were statistically analysed on group, according to test t.

The comparison of all the variables measured before and after the treatment pointed out significant improvements in the Aslavital treated group (Table 3):

— A.d.c., variant I with $p < 0.01$ and variant II with $p < 0.02$;
— N.M., variant I with $p < 0.02$ and variant II with $p < 0.01$;
— C.O.n.s.m., with $p < 0.05$;
— C.C.n.s.m., variant I with $p < 0.2$ and variant II with $p < 0.01$;
— T.L.n.s.m., with $p < 0.05$.

Table 3

Comparative data of the psychological tests prior and consequent to Aslavital

Tests	Before		After		p
	m.	d.c.	m.	d.c.	
N.M.	3.60	±0.12	4.04	±0.13	<0.02
	2.56	±0.10	3.21	±0.12	<0.01
A.d.c.	0.15	±0.03	0.05	±0.01	<0.01
	0.67	±0.10	0.35	±0.07	<0.02
C.O.m.l.s.	29.82	±3.47	21.17	±3.13	<0.05
C.C.m.l.s.	1.08	±0.15	0.60	±0.12	<0.02
	2.43	±0.27	1.47	±0.15	<0.01
	1.43	±0.18	0.69	±0.11	<0.01
T.L.m.l.s.	199.21	±12.79	166.78	±9.94	<0.05

Abbreviations:

N.M. = number-memory
A.d.c. = attention, double checking
C.O.m.l.s. = circle outline — motor level and style
C.C.m.l.s. = circle cutting — motor level and style
T.L.m.l.s. = tapping lines — motor level and style

The above-mentioned data pointed to the positive influence of the Aslavital treatment on the mentally deficient children.

DISCUSSIONS

Aslavital is a procaine-based solution which influences the psychic functions, as pointed out by Ana Aslan as early as 1954 [7]. Procaine and diethylaminoethanol action on the metabolism of the neurons account for the above-mentioned influence [8, 9, 10, 11, 12].

Subsequently, Ana Aslan added potassium glutamate to the solution of Gerovital H3, preserving the pH. An intensified acetylcholine production, as well as a stronger influence of the glutamic acid on the energy metabolism of the neurons, were thus obtained. The researches pointed out that Aslavital had a stronger action on the central nervous system than Gerovital H3.

The researches on the new product Aslavital carried out by Ana Aslan, evidenced its effectiveness on the precocious aging of the central nervous system.

The present double-blind study revealed the effectiveness of the Aslavital treatment on a group of mentally deficient children.

The results of the research have been interpreted as follows:

The number memory tests points out the improvement of the voluntary memorizing ability in the treated children.

The double-blind checking test of attention revealed the significantly improved ability of the subjects to carry on a mental activity with twofold perceptive discrimination: checking of one sign and checking of two signs.

The results of the tests checking the motor style and level point out the higher motor abilities of the children in the treated group as well as the coordination of the movements of the two hands.

The higher qualitative index of the results of the circle outline test points out the favourable change induced by the treatment through the intellectual factor, whereas in the tapping lines test through the motor style.

Mention should be made of the relatively short period of treatment (three months); consequently, the influence of the growth and maturation process can not be taken into consideration.

As the study was conducted during the school year, the teachers noticed significant improvements in the Aslavital treated children, particularly in their ability to learn (reading, calculating, memorizing) and to behave (integration with others, active participation in school activities, desire to be appreciated, decreased psycho-motor instability).

No side effect of the medication was noticed during the treatment.

CONCLUSIONS

The conditions and criteria of this research proved that, in the recovery of the mentally deficient children, the Aslavital chemo-therapy has an effective influence on the dynamics of the adaptative function of the central nervous system.

Consequently, its great importance should be mentioned for the special instructive steps taken in order to recover these children.

Aslavital thus receives new therapeutical indications.

Résumé. L'étude a été effectuée sur un lot de 44 élèves, garçons ayant entre 7 et 14 ans avec le diagnostic de déficience mentale légère ou modérée.

On a utilisé la technique du double insu; ainsi, 23 sujets ont été traités à l'Aslavital et 21 sujets ont subi des piqûres à Placebo (sérum physiologique).

On a administré à tous les sujets des quantités égales de substance (4 ml), conformément au même schéma (6 jours par semaine); on a administré à chaque sujet, de la sorte, 75 injections.

L'examen psychologique a inclus des tests pour l'évaluation du niveau mental, de la mémoire, de l'attention, de l'activité motrice.

Les tests psychologiques antérieurs au traitement n'ont pas mis en évidence de différences significatives entre les deux groupes.

Les tests ultérieurs au traitement à l'Aslavital ont mis en évidence des améliorations manifestes, aussi bien de la dynamique de l'activité intellectuelle, que de sa projection sur le plan moteur.

Les professeurs ont constaté de meilleurs résultats chez les garçons appartenant à ce lot.

On n'a pas observé de modifications significatives aux garçons du lot « Placebo » par rapport aux tests initiaux.

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