

The Efficacy of a Homeopathic Preparation in the Management of Attention Deficit Hyperactivity Disorder

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Abstract

The aim of the study was to evaluate the efficacy of the homeopathic combination preparation Selenium-Homaccord[®] in the management of Attention Deficit Hyperactivity Disorder (ADHD). The study completed was a double blind, placebo-controlled clinical trial. The study group consisted of twenty children diagnosed with ADHD, ten on prescribed psychostimulant medication and ten not on any medication.

Current management of ADHD involves the administration of powerful drugs, of which the long-term value is questionable and side effects common. Although orthodox treatment may improve many aspects of general behavior in the ADHD child, studies have failed to show it to be effective in improving school achievement.^{1, 2} Prognosis remains unchanged, whether the child is on allopathic drugs or no medication.^{3, 4}

Selenium-Homaccord[®] was administered over a two-month period, with three evaluations being done during the treatment period. Children were required to complete a Children's Checking Task in the course of these evaluations and parents completed the Conners Parent's Symptom Questionnaire.

The results of the above tests were analyzed statistically, using the analysis of variance technique. The alpha value was set at the 0.05 level of significance. From the results, it was apparent that

Selenium-Homaccord[®] was effective in decreasing the overall hyperactivity exhibited by an ADHD child. Significant differences were seen regarding the child's inattention, impulsivity, anxiety, and sleep disturbances. These changes were more widespread in the experimental group than in the control group.

Introduction

ADHD is the most common behavior disorder seen by child psychiatrists⁵ and is diagnosed in 40 percent of children seen by psychiatrists in the United States.⁶ Estimates suggest that ADHD affects ten to twenty percent of the school age population.⁷ This condition is seen approximately four times more often in boys than in girls.

The American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders Fourth Edition⁸ identifies three main presenting features of ADHD children: inattention, hyperactivity, and impulsiveness. This triad often results in a failure to interact well with family members and failure at school, both academically and socially.⁷ The DSM-IV criteria stipulate that the symptoms must have been present before the age of seven and present in two or more settings (e.g., at school and at home). A diagnosis is not made if the criteria observed do not clearly result in a clinically significant impairment in social, academic, or occupational functioning.

The onset of ADHD typically occurs before the age of three, evidence often

being present from birth⁹ and peak presentation with health care professionals takes place between the ages of seven and ten years. Symptoms of inattention affect classroom work and academic performance. Impulsive symptoms may lead to the breakdown of familial, interpersonal, and educational rules, especially in adolescence.⁸ Their actions appear disorganized, non-goal directed, and lack reflection on cause and effect.¹⁰ They fail to give close attention to detail, their work tends to be messy, and they often make careless mistakes in schoolwork and other tasks. Hyperkinesis may be manifested by fidgetiness or squirming in one's seat, by excessive running or climbing in situations where it is inappropriate, or by talking excessively. Mood swings are common⁹ and it is estimated that up to 25% of ADHD children suffer from depression.¹¹ Wong¹² found that 40% of children with learning disabilities scored in the depressed range on the Roberts Apperception Test for Children.

The cause of ADHD is unknown but numerous factors have been identified that may play a role in the pathogenesis of this syndrome. These include neurochemical, hereditary, and dietary dysfunction, brain damage, and parental behavior.

Current management of ADHD is multifactorial, often involving medication, behavioral counseling, and dietary control. Cerebral stimulants are the most widely used drugs for the management of ADHD. Many controlled studies using both subjective and objective criteria to judge response, indicate that

psychostimulants are beneficial in children with ADHD when used for one to three months.¹⁰ Side effects commonly seen include decreased appetite, insomnia, increased heart rate or blood pressure, stomach aches,¹³ withdrawal symptoms, and irritability.¹⁴ Long-term use of the psychostimulants may limit linear growth and weight, most likely due to appetite suppression, decreased food intake, and altered secretion of growth hormone.¹⁰

Data has shown a 1000% increase in drug abuse injury reports involving Ritalin[®] in the ten to fourteen year age group.¹⁵ The results of several long-term follow-up studies have indicated minimal improvement beyond those obtained at the onset of treatment¹⁶ and it is still unclear whether stimulants do in fact improve long-term academic achievement.¹⁷

Homeopathic preparations are known to have minimal to no side effects and do not result in dependency. Selenium-Homaccord[®] is an antihomotoxic preparation consisting of selenium in varying potencies (10X, 15X, 30X, 200X) and potassium phosphate in varying potencies (2X, 10X, 30X, 200X). Selenium-Homaccord[®] is indicated for the treatment of diminished mental capacity, lack of concentration, forgetfulness, depression, exhaustion, and deficiency of memory.¹⁸

Follow-up studies on children with ADHD have found that they do not grow out of their difficulties.^{19, 20} Long-term studies on ADHD children have indicated that only about 25% of these children make good adjustments to adult life. Approximately 15% of ADHD children become frankly psychotic at some stage during their adult lives and 40 to 60% continue to have significant concentration and impulse control difficulties.²¹

Materials and Methods

The study completed was a double blind, placebo-controlled clinical trial without crossover. Score results from a placebo/control group were compared with results from an experimental group. This study comprised a sample size of 20 subjects, which was made up of ten children currently taking methylphenidate hydrochloride (Ritalin[®] group), and ten children who were not taking any medication for their ADHD (Non-Ritalin[®] group). Each group of ten children was randomly divided into two groups of five, a control and an experimental group. Children participating in the study had to comply with the delimitations set for the study.

The Conners Parents Symptom Questionnaire (PSQ) and Children's Checking Task (CCT) were used to evaluate the response to medication. The PSQ is the most commonly used rating scale of parental opinion in ADHD, developed by C.K. Conners. The PSQ has been revised and refined numerous times since 1969,²² has repeatedly been proven to be drug-sensitive, and discriminates hyperactive from normal children.⁶ The CCT is a valuable assessment of motor-visual skills and especially of sustained attention.²³

The treatment period was carried out over a total period of 60 days. For the duration of the study the children were required not to change the dosages of any medications or supplements that they were taking prior to commencing the study. Tests were conducted before treatment commenced, on day 30, and on day 60. Each child was seen individually by the researcher, in the same environment for each test.

Results

The raw data obtained from tests one, two, and three for the CCT and PSQ

were statistically analyzed using Repeated Measures Analysis of Variance technique (ANOVA) and the Unpaired t-test.

The sample group was made up of 18 boys and two girls. ADHD is more prevalent among boys than girls. Ratio estimates of gender distribution in ADHD range from 4:1⁴ to 10:1.²⁴ The gender distribution seen in this study reflects the latter ratio.

The CCT results can be categorized into four groups: letters, numbers, symbols, and words. Each group evaluates a different component of mental functioning. An improvement in the overall test results would indicate an increased sustained attention level. Combined results for the Ritalin[®] and Non-Ritalin[®] placebo groups from tests one, two, and three revealed no significance. Results from the Ritalin[®] and Non-Ritalin[®] experimental groups showed a significant difference between tests one, two, and three.

The PSQ results can be divided into the following major groupings: conduct problems, inattention, psychosomatic problems, impulsivity-hyperactivity, and anxiety. The PSQ can also be scored for the hyperactivity index, which represents the overall measure of hyperactivity, taking into account typical ADHD symptoms. The experimental results from the Ritalin[®] and Non-Ritalin[®] groups showed an extremely significant P-value (P=0.0134). All the major groups of the PSQ showed a greater significance in the experimental group versus the control group. These differences were the most pronounced in the categories of conduct problems, psychosomatic problems, impulsivity, and anxiety.

Discussion

The CCT was used to evaluate the participants' attention span over a period of time. The Ritalin[®] and Non-

Ritalin[®] experimental group both showed a steady improvement in test results, with an average 3.7% increase between tests one and three. Combined results for the two experimental groups showed a significant P-value, whereas the control group did not. This indicates that there was a greater overall improvement in sustained attention in the experimental groups than in the control groups.

The Inattention category of the PSQ evaluates symptoms such as sustained attention and distractibility, problem areas often seen in ADHD children. Results showed an improvement in the experimental and the control group. There was a 23% decrease in inattention in the control group between tests one and three, while the experimental group showed a 33% improvement. These results verify the potential value of Selenium-Homaccord[®] in attention difficulties, one of its major indications.

The Impulsivity/Hyperactivity category of the PSQ evaluates symptoms such as the child's restlessness and excitability. An overall improvement was seen in the experimental and the control group. However the experimental group showed a 35.8% improvement, as compared to 21.2% in the control group. Impulsive symptoms in social situations often manifest as irresponsible behavior, intruding on others, accidents, and impatience, which may be seen as conduct problems.⁸ This lack of self-control affects sociability and cooperation.²⁵

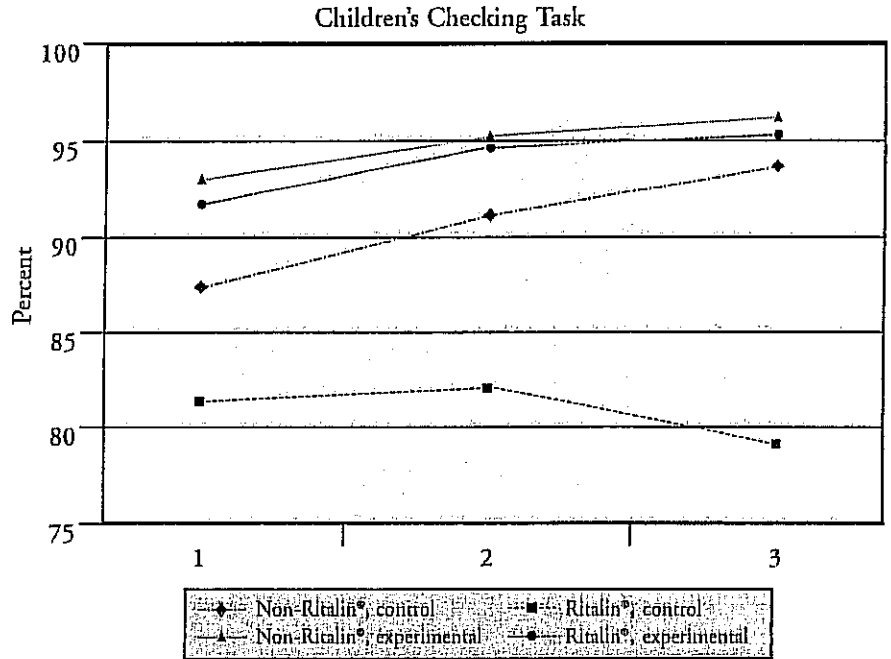


Figure 1: Line graph illustrating the mean scores for the CCT, before, during, and at the end of treatment.

The Conduct Problem's category of the PSQ evaluates symptoms such as disobedience, destructiveness, rebelliousness, and disrespect towards elders. A steady improvement was seen in the experimental group, showing a 41.3% change. The control group showed a considerably smaller change between tests one and three, an improvement of 1.3%. These positive results are supported by the Impulsivity/Hyperactivity results seen above.

The ten items of the Hyperactivity Index are sometimes used alone in abbreviated scales to determine the presence of ADHD.²⁵ This category evaluates the major ADHD symptoms such

as inattention, impulsivity, and hyperactivity. It also rates mood lability and conduct problems, which are commonly seen in ADHD. The experimental group showed an improvement of 45.5% between tests one and three, as compared to 22.1% in the control group.

Anxiety levels were evaluated by the PSQ during the treatment period. Symptoms evaluated in this category include fearfulness, shyness, and worry. Anxiety is one of the most common causes of attention difficulties and excessive motor activity in children.²⁶ A 53.8% improvement in anxiety was seen between tests one and three in the experimental group, as compared to 3.1% in the control group.

This may be attributed to the good results obtained with other important ADHD symptoms such as inattention, impulsivity, and hyperactivity. As the child's confidence levels improve, so his anxiety levels will decrease and he will be able to cope better with social and educational challenges.

GROUP	TEST 1	TEST 2	TEST 3
1. Non-Ritalin [®] , control	1.06	0.95	0.78
2. Non-Ritalin [®] , experimental	1.4	1.06	0.68
3. Ritalin [®] , control	1.66	1.36	1.34
4. Ritalin [®] , experimental	2.12	1.56	1.24

Table: Mean factor PSQ scores for the Hyperactivity Index category during the study period.

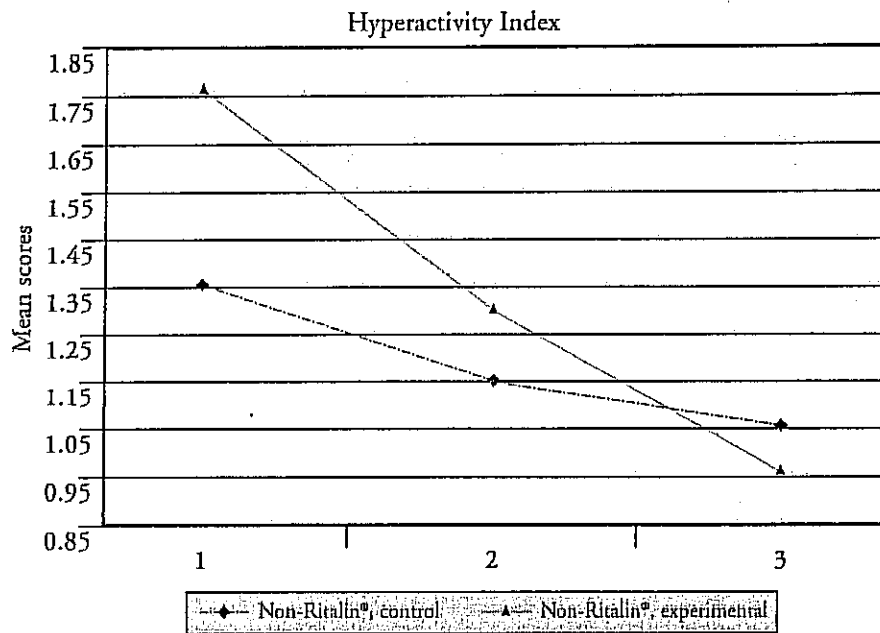


Figure 2: Line graph illustrating the mean scores for the Hyperactivity Index on the PSQ, before, during, and at the end of treatment.

Parents were asked to report any changes they observed in their children during the testing period, which was not covered in the questionnaire. Six parents mentioned that their children were sleeping better since they had started the trial. Four of these children fell into the Ritalin[®] experimental group, one into the Non-Ritalin[®] experimental group and one into the Non-Ritalin[®] control group. Sleep disturbances are not an area covered by the present study, but this result should be noted since Ritalin[®] often causes disturbed sleep patterns.²⁷

Conclusion

The substantial improvement seen in the Hyperactivity Index of the PSQ shows that Selenium-Homaccord[®] is effective in the global management of ADHD. An overall improvement was seen in the children's attention spans, impulsivity, and hyperactivity.

Positive results were also seen in categories such as conduct problems, anxiety, sleep disturbances, and impulsivity. These

are not listed indications for the preparation.¹⁸ However, the indications for the individual constituents of Selenium-Homaccord[®] do propose the use of these remedies for similar symptoms.

These findings suggest that Selenium-Homaccord[®] results in an overall improvement in the clinical picture of ADHD, when compared to a control group. These results were seen in children not taking any medication for their ADHD, as well as a group of children taking Ritalin[®] regularly. The administration of Selenium-Homaccord[®] is safe to use in addition to psychostimulants in the management of ADHD.

Additional clinical trials are needed to further explore the full therapeutic possibilities of this preparation in ADHD, preferably with a larger study group and over a longer period of time. Long-term follow up studies after ten to twenty years could also yield needed results on the efficacy of long-term homeopathic treatment in ADHD versus psychostimulant therapies.

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