

CLINICAL STUDY ON HOMOEOPATHY FOR ATTENTION DEFECIT HYPERACTIVITY DISORDER (ADHD) IN SCHOOL CHILDREN

ABSTRACT:

ADHD children are very hyperactive, impulsive, will be noticed early because their social behaviour is inappropriate. They often cannot follow rules, feeling restless, often fidgeting with hands or feet or leaving a seat in situations where sitting or quiet behaviour is expected, blurting out answers before hearing the whole questions, homework is particularly hard for these children. All the modern medicine drugs for ADHD will suppress the activities of the child. The child may end up with inactive. So need an effective management for this condition. In this study we came to know that Homoeopathic system has wide scope in this area, as it treat the child as a whole. By using Vanderbilt ADHD Diagnostic Parent Rating Scale rating scale a general assessment is made and conformation by diagnostic criteria given in DSM V.

KEYWORDS:

Attention Defecit Hyperactivity Disorder, Vanderbilt ADHD Diagnostic Parent Rating Scale, Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V), Calcarea Carbonica and Tarentula hispanica.

ABBREVIATION:

ADHD - Attention Defecit Hyperactivity Disorder; DSM(V) - Diagnostic and Statistical Manual of Mental Disorders

INTRODUCTION:

Attention Deficit Hyperactivity Disorder (ADHD) is one of the most common childhood brain disorder marked by an ongoing pattern of inattention, hyperactivity, impulsivity that interfere with functioning and development. One of the most prevalent health condition affecting school aged children, and the most extensively studied mental disorder of childhood. Experts consider ADHD to be a chronic condition that has no cure. But our Homoeopathic researchers try to sprout a reasonable evident improvement in these cases.

AIMS AND OBJECTIVES:

1. This study is to find the efficacy of homoeopathic medicine for the treatment of the children with ADHD.
2. To find the suitable potency of Homoeopathic medicines effective for the treatment of the children with ADHD.

MATERIALS AND METHODOLOGY:

STUDY DESIGN:

1. Single group, experimental, before and after study without control.
2. Data were collected according to standard chronic sheet format.
3. Pre and post treatment analysis were done using Vanderbilt ADHD Diagnostic Parent Rating Scale.
4. To study the effectiveness of the homoeopathic medicine.
5. Case taking along with physical examination and required investigation were done.
6. Results were subjected to statistical analysis and hypothesis were tested using paired 't'-test.

SELECTION OF SAMPLE

Sample size: 30 cases

Sample technique: Purposive sampling

Inclusive criteria:

- Both sexes were included.
- Children between 5 to 18 years of age.

- All types of diagnosed cases of ADHD.

Exclusive criteria:

- Patient who have other severe systemic illness.
- Patient who have other behavioural problems such as oppositional defiant behavioural disorder, conduct behaviour disorder, anxiety or depressive disorder.

DIAGNOSTIC CRITERIA:

Vanderbilt ADHD Diagnostic Parent Rating Scale. By using this rating scale a general assessment is made and conformation by diagnostic criteria given in DSM V.

INTERVENTION:

- Case taking and medicine selection and administration according to homoeopathic principle.
- Pre-post treatment analysis using improvement criteria score.
- All types of diagnosed cases of ADHD.

DATA COLLECTION:

Interview technique (both children as well as bystander) including case taking based on the direction given in Organon of medicine and remedy selection based on authorized homoeopathic Materia Medica.

PROCEDURE:

1. Detailed case taking and recording of problems in standardized chronic case record format.
2. Clinical examination with finest investigation.
3. Prescription is done with reference to standard text book of material medica as well as repertory.
4. Potency selection and repetition were done according to principles laid down in the Organon of medicine.
5. Observations were noted by Vanderbilt ADHD diagnostic parent rating scale.

SELECTION OF TOOLS:

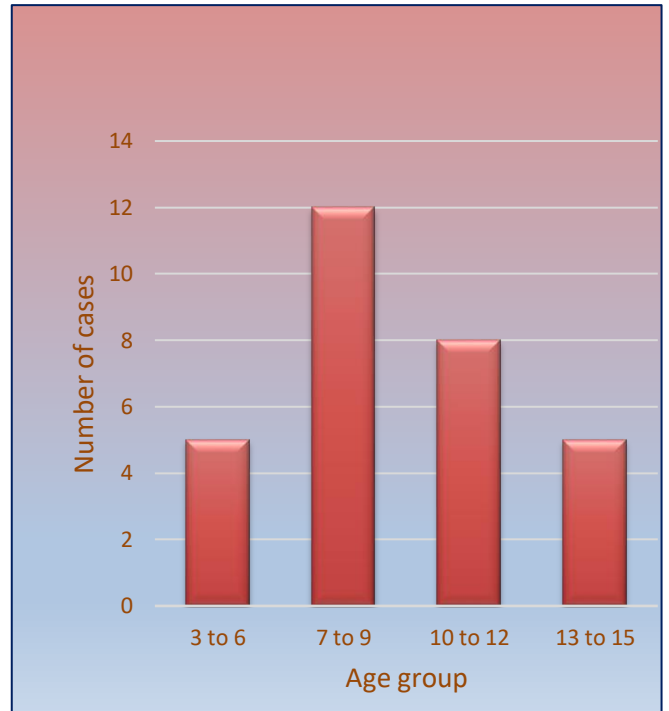
Assessment criteria **Vanderbilt ADHD** diagnostic parent rating scale for evaluating the prognosis of case.

OBSERVATION AND RESULT:

Total number of 30 cases was prescribed with homoeopathic medicines based on individualization and mostly concentrated in mental symptoms and the potency selection is based on the susceptibility of the patient. All cases were followed for the minimum period of 2-6 months.

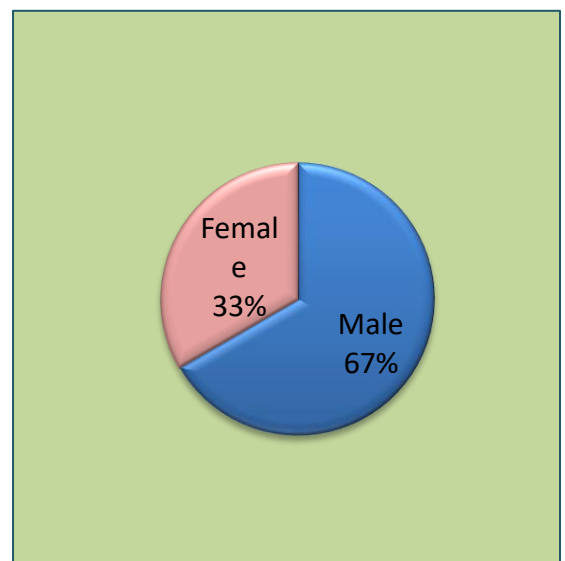
Distribution of cases based on Age group

AGE	NUMBER OF CASES
3 to 6	5
7 to 9	12
10 to 12	8
13 to 15	5
16 to 18	0



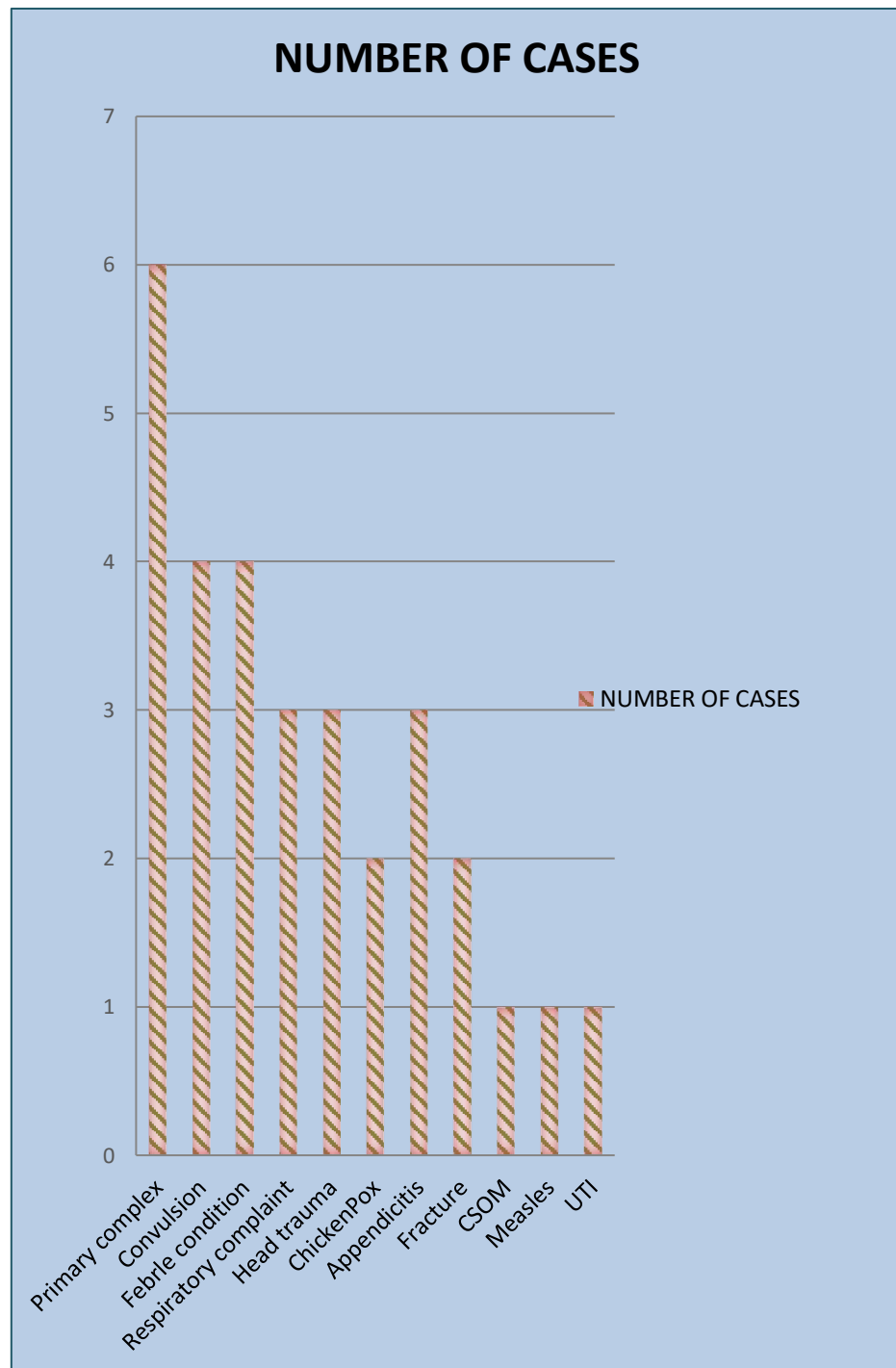
Distribution of cases according to gender

GENDER	NUMBER OF CASES
Male	20
Female	10



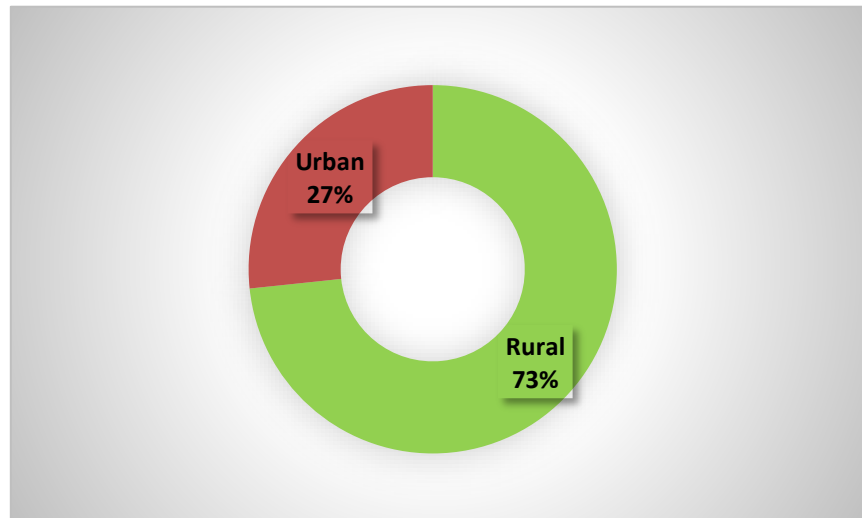
Distribution of cases based on past history

PAST HISTORY	NUMBER OF CASES
Primary complex	6
Convulsion	4
Febrile condition	4
Respiratory complaint	3
Head trauma	3
ChickenPox	2
Appendicitis	3
Fracture	2
CSOM	1
Measles	1
UTI	1



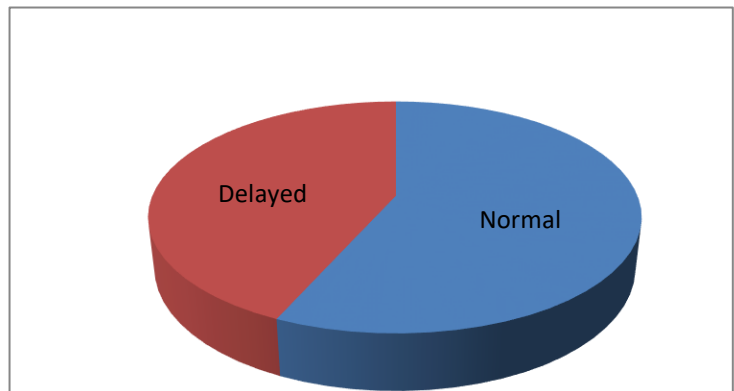
Distribution of cases according to dwellings

DWELLING	NUMBER OF CASES
Rural	22
Urban	8



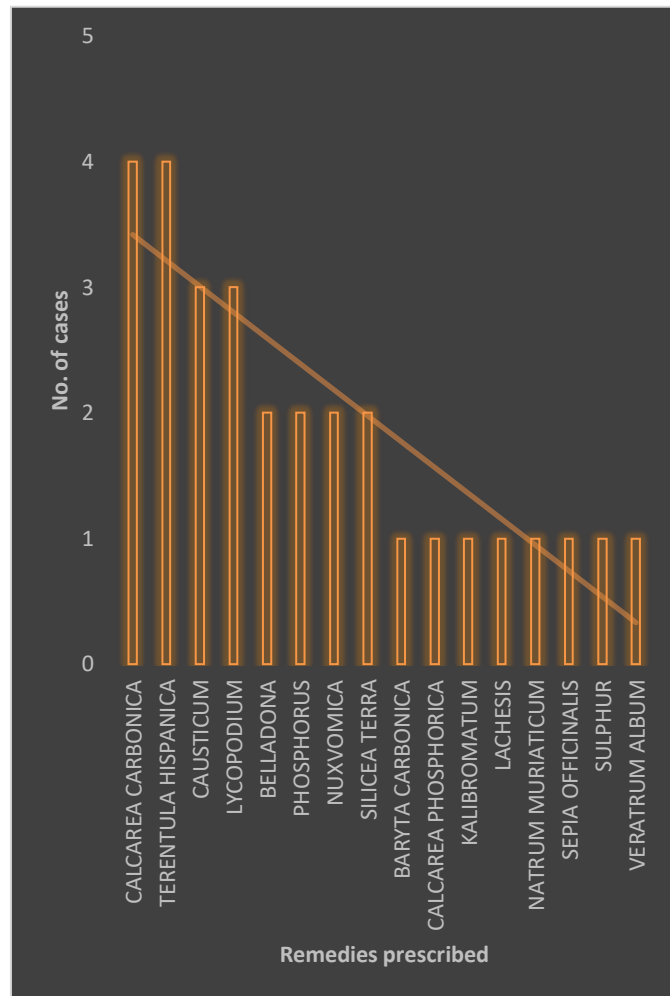
Distribution of cases according to milestone

MILESTONE	NUMBER OF CASES
Normal	17
Delayed	13



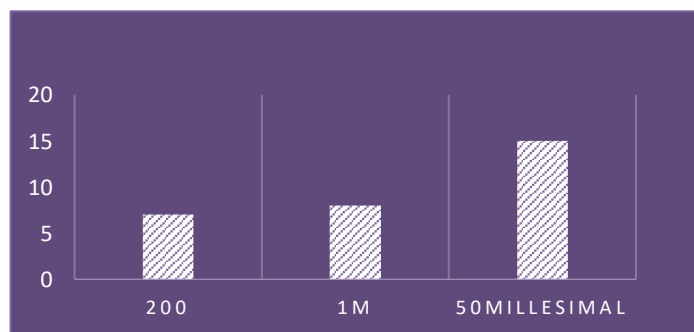
Distribution of cases according to medicine prescribed

Medicine	Number of cases
Calcarea carbonica	4
Terentulahispanica	4
Causticum	3
Lycopodium	3
Belladonna	2
Phosphorus	2
Nuxvomica	2
Silicea terra	2
Barytcarbonica	1
Calcarea phosphorica	1
Kalibromatum	1
Lachesis	1
Natrum muriaticum	1
Sepia officinalis	1
Sulphur	1
Veratrum album	1



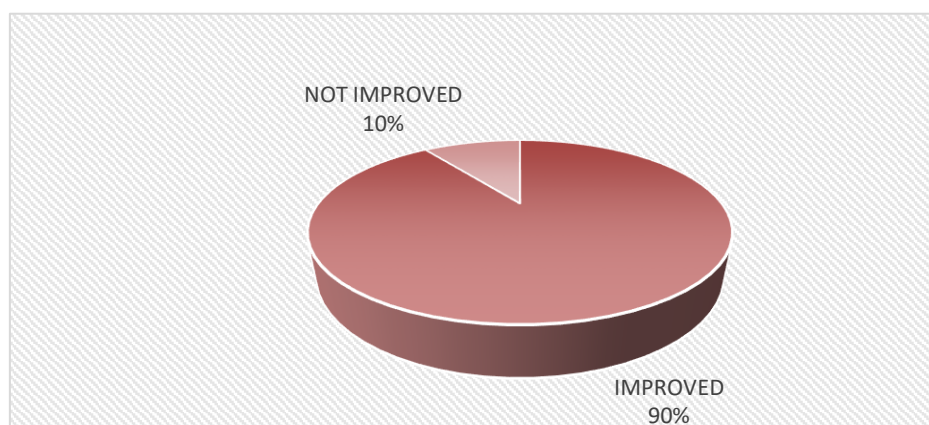
Distribution of cases according to potency

POTENCY	NUMBER OF CASES
200	7
1M	8
50Millicimal	15



Distribution of cases of according to Result

RESULTS	NUMBER OF CASES
IMPROVED	27
NOT IMPROVED	3



STATISTICAL ANALYSIS

Comparison of mean value of ADD scores before and after study:

t-Test: Paired Two Sample for Means		
	<i>ADD score Before</i>	<i>ADD score After</i>
Mean	6.800	5.300
Variance	3.269	5.666
Observations	30	30
t Stat	3.643	
P(T<=t) two-tail	0.001	
t Critical two-tail	2.045	

The before and after score were compared for interpretation of results, the t-test value obtained is 3.643, which is greater than critical value(2.045) and $p < 0.001$, therefore, the study is found significant at 99.99%

Comparison of mean value of Hyperactive / impulsivity scores before and after study:

t-Test: Paired Two Sample for Means		
	<i>HYPERACTIVE/ IMPULSIVE- Before</i>	<i>HYPERACTIVE/ IMPULSIVE -After</i>
Mean	5.4333	3.933333333
Variance	6.1161	4.96091954
Observations	30	30
t Stat	3.1482	
P(T<=t) two-tail	0.0030	
t Critical two-tail	2.0452	

The before and after score were compared for interpretation of results, the t-test value is 3.148, which is greater than critical value(2.0452) and $p < 0.0018$ therefore, the study is found significant at 99.99%

Comparison of mean value of ADHD scores before and after study:

t-Test: Paired Two Sample for Means		
	<i>ADHD- Before</i>	<i>ADHD-After</i>
Mean	12.233	9.167
Variance	9.426	13.661
Observations	30	30
t Stat	4.501	
P(T<=t) two-tail	0.0001	
t Critical two-tail	2.045	

On conducting two tailed t-test p value is 0.0001, t-test value is obtained as 4.501 which is greater than critical value (2.045). Therefore study is found significance at 99.99%

DISCUSSION

Among 30 cases, 12 cases are between the age group of 7-9; 8 cases are in the age group of 10-12; 5 case each in between the age group of 3-6 and 13-15. Over past 6 years among children of age 4-17 years, Children between 4 -11 have 9% of ADHD and children between 12 -17 have 7% ADHD. There is no overall prevalence documented in India for ADHD , however study conducted in primary school children of Navi Mumbai, India, the prevalence as found to be 12.3% while in study conducted at Delhi, it is found to be 17.7% .children are more prone than adults. In my study age group of 7-9 are the most prone group than the other age group.

Among 30 cases, 20 cases were males (67%) and 10 were females (33%). Generally male are more to have ADHD than females. The survey was conducted by associated chambers of commerce and industry of India in 10 major cities .That study showed that ADHD prevalence more in boys to 11% than among girls 5.5 % . In their latest study, published in the September issue of the journal *MAYO CLINIC PROCEEDINGS*, the researchers identified 305 ADHD cases among the 5,701 children. Their finding that male sex was associated with a threefold increase in risk confirms the long-recognized sex difference in the diagnosis of ADHD. In the USA, clinic-referred children with ADHD were found to have a ratio varying from five boys to one girl to nine boys to one girl . In the UK, Thorley and James and Taylor found a ratio of three boys to one girl in samples of clinically Diagnosed ADHD. Several studies showed that ADHD is present mostly for boys than girls. Study conducted in Mumbai, prevalence as found to ratio of boys girls as 3:2 ratios. In this study also it is found that males are prone more than females.

Out of 30 cases, 6 cases have primary complex as past history, 4 cases each have convulsion and febrile illness , 3 cases each have respiratory complaint, appendicitis and head trauma, 2 cases each have chicken pox, fracture, and one case each have CSOM, Measles and UTI as their past history. ADHD may occur after appearance of primary complex, convulsion, febrile illness, head trauma and appendicitis.

In the study of 30 cases, 22 are in rural and 8 are in urban. More cases belongs to rural area. Rural children (24.7%) are more often diagnose as ADHD than Urban children (19.7). ADHD is mostly seen in rural than urban.

Out of 30 cases, 13 cases having delayed milestone and 17 cases are normal milestone. Preterm labour is one of the factors for ADHD in which delayed milestone is seen prominent. So Delayed milestone may be one of the causes for occurrence of ADHD.

For these 30 cases medicines are prescribed according to individualization. The characteristic symptom and mental symptoms are mostly concentrated while prescribing the remedy. On that basis 4 cases of each has CalcareaCarbonica and TarentulaHispanica. Then Causticum and Lycopodium comes for 3 cases each. Belladonna, Phosphorous, Nuxvomica, Silicea is given for 2 cases of each. BarytaCarbonica, Calcarea phosphorous, Lachesis, Kalibromatum were given for one case each. CalcareaCarbonica and TarentulaHispanica are the two remedies which is more indicated for ADHD.

ADHD symptoms in Calcarea carbonica:

- Apprehensive.
- Extremely opposed to watching horror or war movies. Easily startled at least noise. Forgetful, confused, low spirited. Fears loss of reason.
- Averse to work. Slow at school, slow at games. Averse to work on exertion. Weak in geometry and make in simple calculation.
- Keeps playing with hands and fingers all the time or putting them or other object in the mouth frequently. Sensitive to slightest reprimand or rudeness of others.

ADHD symptoms in Tarentula hispanica.

- Sudden alteration of mood. Destructive impulses. Must constantly busy himself and walk.
- Fidgety, and inclined to touch and grasp everything. Impatient; must hurry.
- Answers very abruptly and rudely Averse company, but wants someone present. Ungrateful, discontented.
- A jack-in –the –box type: incredible quickness: springs up suddenly; cannot sit still for a second; sudden impulses.

Out of 30 cases, 200 potency is given for 7 cases, 1M is given for 8 cases, 50 millisimal is given for 15 cases. More cases given 50 millesimal potency. Frei and colleagues used individualized homoeopathic medicines in LM (50 millesimal) potencies and the results appear to be similar to the effects of methylphenidate particularly in preschool children. 50 millesimal is effective in ADHD case.

Out of 30 cases 28 cases are improved, 3 cases need improvement.

CONCLUSION:

Most common age group was found between 7-9 years. Males were commonly affected and ADHD is seen mostly in rural than in urban. Delayed Milestone has relation to develop ADHD. Calcarea Carbonica and Tarentula hispanica are the two remedies mostly suited for ADHD. Study revealed that out of 30 cases 15 cases are treated with 50 millesimal potency. 50 millesimal potency was found effective in the treatment of ADHD and related diseases. Out of 30 cases 27 cases are improved, 3 cases need improvement.

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