



CLINICAL EVALUATION OF *BRAMHI TAILA SHIROPICHU AND BRAMHI SYRUP* IN THE MANAGEMENT OF ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD)

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ABSTRACT This study evaluates the efficacy of Brahmi syrup and Brahmi Tailaa Shiropichu in managing Attention Deficit Hyperactivity Disorder (ADHD) in children. ADHD, characterized by inattention, hyperactivity, and impulsiveness, significantly affects children's academic and social development. The randomized controlled clinical trial involved 32 children aged 6-15, divided into two groups: one receiving Brahmi syrup and the other Brahmi Tailaa Shiropichu. Both interventions were assessed based on DSM-IV criteria and reaction times over a 60-day period. Results indicated that Brahmi Tailaa Shiropichu showed superior improvement in ADHD symptoms, particularly in attention and hyperactivity measures, compared to Brahmi syrup. Specifically, Group B exhibited greater enhancements in sustaining attention, organizing tasks, and reducing hyperactivity and impulsivity, with statistical significance in most parameters. Furthermore, visual and auditory reaction times improved more substantially in the Shiropichu group. In conclusion, while Brahmi syrup demonstrated moderate efficacy, Brahmi Tailaa Shiropichu was significantly more effective, suggesting that Shiropichu, especially when combined with Brahmi syrup for extended durations, could provide a highly effective ADHD management strategy. Further studies with larger sample sizes are recommended to confirm these findings.

KEYWORDS : ADHD, Attention Deficit Hyperactivity Disorder, Brahmi Syrup, Brahmi Tailaa Shiropichu, Ayurvedic Treatment, Pediatric ADHD, ADHD Management, Moordha Tailaaam, Hyperactivity, Inattention, Impulsiveness, Reaction Time

INTRODUCTION

Attention and activity disorders are prevalent emotional and behavioral issues in children and adolescents, characterized by hyperactivity, impulsiveness, and inattention. Symptoms include easy distraction, forgetfulness, daydreaming, nonstop talking, difficulty awaiting turns, and fidgeting, typically beginning by age six and persisting for at least six months, impairing development¹. ADHD affects academic and social functioning, with WHO predicting a 50% rise in mental disorders by 2020. In 2016, 9.4% of children aged 2-17 in the US were diagnosed with ADHD, often linked to poor academic performance and behavioral difficulties².

Ayurveda, though not directly mentioning ADHD, offers remedies based on symptoms and pathology. Moordha Tailaa³ treatments like Shirodhara, Shiropichu, Shirobasti, and Shiroseka may improve brain and memory functions, attention, and concentration by enhancing brain oxygen perfusion and arterial blood volume in brain microvessels. This study aims to evaluate the efficacy of Brahmi Syrup and Brahmi Tailaa Shiropichu in managing ADHD, improving school performance, and overall child health with minimal side effects.

Aims & Objectives

- To evaluate the efficacy of Brahmi Syrup in the management of ADHD.
- To evaluate the efficacy of Shiropichu with Brahmi Tailaa in the management of ADHD.
- To improve school performance and to improve overall health status of child.
- To provide better management of ADHD with minimal side effect.

MATERIAL AND METHODS

Type of Study: Randomized controlled open clinical trial

Source - Children for the present study were screened out from OPD of Rishikul hospital Haridwar, and from various schools, situated in Haridwar

Age Group - Children between 6 to 15 years were considered for study.

Sample Size- 40 children were registered out of which 08 children discontinued the treatment. Grouping of patients- Selected children were randomly divided into two groups.

Group A - This group of 10 children were given the Brahmi Syrup.

Group B - This group of 10 children were given Brahmi Tailaa Shiropichu.

Diagnostic Criteria - ADHD pre-assessment criteria based on DSM-IV criteria.⁴

A. Inclusion Criteria

- Aged >6- <16 years, satisfying DSM-IV criteria.
- Children with average / normal IQ level

B. Exclusion Criteria

- Children with physical disability, with seizure disorder, exposed to substances like Nicotine, alcohol, recreational drug and
- Children with diagnosed psychiatric illness

C. Criteria For Withdrawal

- Personal matters or if Parents not willing to continue the treatment
- Aggravation of symptoms

D. Assessment Criteria -

DSM-IV and Reaction Time

DRUG: The drug BRAHMI (Bacopa monnieri)⁵ in the form of syrup was selected for the present study. The dose for 6-10 years patients was 10 ml bid and for 11-16 years it was 10ml tid. The syrup was given with milk for 60 days.

Shiropichu (Brahmi oil)

Material required- Medicated oil, Small vessels for heating oil, gas for heating, Sterile cotton pads or sterile bandage cloth, Sterile clothes, sponges, napkins or tissue papers for wiping etc.

Procedure- It is divided as follows⁶:

Purvakarma- Remove hair completely from the head.

Pradhan karma- Massage the head with Luke warm oil (around 40°C). Place the cotton over the scalp uniformly with a thickness of 2cm. Gauze piece is tied around the head above the eyebrows, to hold the cotton in place and to prevent oozing of oil into the face. Pour the Luke warm oil (around 40°C) over the bregma region so that sufficient quantity reaches the scalp. Keep this for 25-30 minutes.

Paschat karma- After the procedure, gauze and cotton should be removed. Wipe the head. The patient should not immediately expose himself to cold or cold measures, wind, sunlight, dust, etc.

Duration - Shiropichu was done in 3 sittings (one sitting for 15 days) with the gap of 7 days.

Criteria Of Assessment

Before the treatment, during the treatment and after 60 days of treatment, the Effect of the therapy was assessed on the basis of improvement in obtained scores in, DSM-IV criteria, Reaction Time assessed.

OBSERVATION AND RESULTS

62.5% of children were between age group 6-9 years followed by 27.5% in age group 10-13 years, minimum patients 10% were between

the age group 14-16. Maximum numbers of children (67%) were males. Majority of patients (35%), belonged to lower middle class.

Maximum number of patients (72.5%) belonged to nuclear family. Majority of patient's (67%) mode of delivery were NVD.

Maximum numbers of children (42.5%) were of Vata Pradhan Prakriti. 22.5% children were of Pitta-Vata Prakriti. Predominance of Madhur rasi in diet was found in maximum number of patients (52.5%).

Majority of Patients (42%) had good appetite; followed by 36% of patients having excessive appetite. Maximum number of patients (45%), showed excessive sleep pattern followed by 35% of patients had disturbed sleep and 20% had less sound sleep.

Study included maximum number of patients (47.5%) of combined sub type of ADHD. 27.5% of patients were predominantly inattentive while only 25% were predominantly hyperactive.

Group A – Brahmi syrup

S. No.	Symptoms	BT	AT	D	%	W	P
1	Fails to gives details	2.235	1.882	0.352	31.57	-78.00	<0.001
2	Difficulty in sustaining attention	1.823	1.47058	0.3529	19.35	-21.0	<0.05
3	Not seems to listen	2.294	1.882	0.4117	17.948	-28.0	<0.05
4	Not follow instruction	1.823	1.647	0.176	9.67	-6.00	>0.05
5	Difficulty in organizing task	1.70	1.52	0.176	10.34	-6.00	>0.05
6	Often avoid	1.823	1.588	0.235	12.90	-10.0	>0.05
7	Loose the things	1.764	1.058	0.705	40	-55.0	<0.01
8	Easily distracted	1.529	1.176	0.3529	23.076	-21.0	>0.05
9	Forgetful	1.64	0.941	0.705	42.8	-55.0	<0.01
10	Fidget	1.764	1.470	0.294	16.66	-15.0	>0.05
11	Leaves seat	1.529	1.23	0.2941	19.230	-15.0	>0.05
12	Run and climb excessively	2.117	1.764	0.352	16.66	-21.0	<0.05
13	Difficulty in leisure activity	1.705	1.352	0.352	20.68	-27.0	<0.05
14	On the go or driven by a motor	1.705	1.352	0.352	20.68	-27.0	<0.05
15	Blurt out answer before completion of question	1.41	1.176	0.294	20.833	-10.0	>0.05
16	Difficulty in awaiting turn	1.823	1.470	0.352	19.35	-21.0	<0.05
17	Intrudes on other	1.52	1.23	0.294	19.23	-15.0	>0.05
18	Talk excessively	1.764	1.352	0.4117	23.33	-28.0	<0.05

Group B: Brahmi Taila Shiropichu

S.No.	Symptoms	BT	AT	D	%	W	P
1	Fails to gives details	1.666	0.8	0.867	52	-78.00	<0.001
2	Difficulty in sustaining attention	1.8	0.8	1	55.55	-78.00	<0.001
3	Not seems to listen	1.866	0.933	0.933	35.714	-55.0	<0.01
4	Not follow instruction	1.733	1.066	0.66	38.46	-66.0	<0.01
5	Difficulty in organizing task	1.73	0.6	1.133	65.38	-91.0	<0.001
6	Often avoid	1.66	0.866	0.8	48	-55.0	<0.01
7	Loose the things	1.666	1.2	1	28	-28.0	<0.05

8	Easily distracted	1.9333	1.2	0.733	37.931	-66.0	<0.001
9	Forgetful	1.933	1.333	0.6	31.03	-66.0	<0.01
10	Fidget	2	1.133	1	43.33	-78.0	<0.001
11	Leaves seat	1.066	0.666	0.4	37.5	21.00	<0.05
12	Run and climb excessively	2.266	0.933	1.333	58.82	-105.0	<0.001
13	Difficulty in leisure activity	1.533	0.533	1	65.21	-55.0	<0.01
14	On the go or driven by a motor	20	-21.00	<0.05	60	-78.0	<0.001
15	Blurt out answer before completion of question	2.2	0.8	1.4	63.63	-105.0	<0.001
16	Difficulty in awaiting turn	1.73	0.66	1.066	61.53	-78.0	<0.001
17	Intrudes on other	2	0.8	1.2	60	-78.0	<0.001
18	Talk excessively	1.866	0.8	1.06	57.142	-66.0	<0.001

Auditory Reaction Time:

	Mean score			N	%	SD	SE	t Value	P value
	BT	AT	Diff.						
Gr. A	14.41	12.6	1.811	17	12.57	1.62	0.394	4.604	<0.001
Gr. B	22.625	15.931	6.693	15	29.58	4.10	1.06	6.525	<0.001

Visual Reaction:

Groups	Mean score			N	%	SD	SE	t Value	P value
	BT	AT	Diff.						
Gr. A	21.7	19.36	2.37	17	10.93	1.14	0.27	8.55	<0.001
Gr. B	22.0	14.94	7.06	15	32.09	3.65	0.91	7.73	<0.001

DISCUSSION

This study explores the effectiveness of Brahmi Taila Shiropichu and Brahmi syrup in managing ADHD symptoms in children, providing significant findings.

The data shows that 62.5% of patients were aged 6-9 years, and 27.5% were aged 10-13 years, aligning with DSM-IV criteria indicating ADHD symptoms typically manifest before age seven and become apparent during school years. Gender distribution indicated a higher prevalence in males (67.5%) compared to females (32.5%), consistent with previous research.

Socioeconomic factors revealed 35% of patients from lower middle-class and 20% from lower-class backgrounds, suggesting that lower socioeconomic status, potentially leading to malnutrition, may contribute to ADHD. Additionally, 72.5% of patients were from nuclear families, indicating limited family interaction and support might exacerbate ADHD symptoms.

Regarding sleep patterns, 55% of patients experienced excessive sleep while 25% had disturbed sleep, reflecting the common association between sleep disorders and ADHD.

Treatment outcomes indicated that Group B (Brahmi Taila Shiropichu) showed significantly higher improvement rates across several dimensions of inattention and hyperactivity/impulsivity compared to Group A (Brahmi syrup). For inattention, Group B exhibited 52% improvement in attention to details and 65% in organizing tasks, compared to 31.57% and 10.3% in Group A. In hyperactivity/impulsivity, Group B outperformed Group A, showing 43% improvement in fidgeting and 65% in engaging in quiet activities, compared to 16% and 20% respectively in Group A.

Reaction time improvements further underscored the efficacy of Brahmi Taila Shiropichu, with visual reaction time improving by 36% in Group B compared to 10% in Group A, and auditory reaction time improving by 29% in Group B compared to 12% in Group A. This suggests enhanced cognitive processing speed and attention in the Shiropichu group.

The superior performance of Brahmi Taila Shiropichu may be due to its dual mechanism of topical application, enhancing blood circulation and oxygen perfusion in brain tissues, along with the cognitive

enhancement properties of Bacopa monnieri.

CONCLUSION

On the basis of above data inferred from this study, authors concludes that oral intake of Brahmi Syrup and Shiropichu with Brahmi oil are effective for the patients of ADHD but Shiropichu with Brahmi oil is more effective than Brahmi syrup.

REFERENCES

1. O.p.ghai, gupta piyush, paul v.k, ghai essential paediatrics 6th edition, revised reprint with correction: 2005, chapter 2, pag no.64.
2. amath sachidananda, national president, indian academy of paediatrics, indian pediatric 2015; 52:13.
3. Dr. Brahmanandtripathi, astanghridayam, sutra sthan chapter no. 22, shlok no.23, chaukhamba publication.
4. American Psychiatric Association, DSM-IV. Diagnostic and Statistical Manual of Mental Disorders. 4 th ed. Washington DC: American Psychiatric Association Press. 1994.
5. Prof. P.V Sharma, dravyagun-vijnana vol 2, chaukhambhabharti academy, 2006.
6. Ashtavidyan Dr.E.T. neelakandhan mooss, A practical handbook of panvhkarma & associated keralaspecialitytherapies, published by vaidyaratnam books first edition, 2010.
7. <http://www.indianjpsychiatry.org/article.asp?issn=0019>
8. Kumarshinghal harish, ayurvedic approach for improving reaction time of attention deficit hyperactivity disorder affected children NIA, Jaipur, Rajasthan. 2010.