

A COMPARATIVE CLINICAL STUDY ON SCHOOL GOING CHILDREN WITH MEDHYA RASAYANA (MEDHYA RASAYANA), W.S.R TO IQ

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ABSTRACT

Intelligence is a vital essentiality in day to day life. In this era of competitive world, academic achievements are considered as most important especially in children who have to build up their life in an appropriate manner. There is lot of stress on children which may give rise to poor academic performance, lack of confidence, inferior and insecure feelings among children. It becomes invariably essential to have great abilities in terms of intelligence and memory right from childhood itself.

Medhya Rasayana is the unique concept of Ayurveda which is proved to be a powerful solution for this problem as it is especially meant for improving Medha. Keeping this in mind present study was undertaken as to analyze the concept of Medhya Rasayana and to apply the concept in School going Children.

KEY WORDS-Medha, Memory, Intelligence, IQ, Medhya Rasayana

INTRODUCTION

Ayurveda, which is the science of life, also called an eternal science; deals with spiritual, psychological and

physical well being of the individual. It covers all spheres of life as is clear from the following definition of *swastha*(healthy person).

Man has been to conquer the peak in all walks of life because of his unlimited thoughts as well as ambitions. It is the discriminative capacity which makes him different from animals. Language, observations, analytical mind, research aptitude and many more contributed for human intellect. For the successful survival of man in this competitive world there is a need for promotion of mental health and management of various psychological and psychosomatic problems. In the Era of Competitive world, Buddhi / Intelligence is a vital essentiality and this competition spirit is being injected by the society even to the brain of infants and children.

Once a child is born the parents start designing his or her future in order to build him / her up as a successful individual. On the other hand his individualities as well as capacities does not get fertile soil to grow up. The intellectual capability of children has naturally become a matter of concern for scientific society. Hence, academic achievements are considered as most important especially in children who have to build up their lives in an appropriate manner.

IQ is score derived from one of the several different standardized test to assess intelligence.³ Children with border line intelligence (IQ: 71-84) are slow learners, irrespective of etiology present with poor school performance.⁴ Attention, concentration and memory also play a remarkable role in academic performance.

Rasayana is one of the major branch of Asthanga Ayurveda. The Rasayana Chikitsa means rejuvenation i.e. Preventive therapy. Rejuvenation literally means to return to youthful conditions or to the normal from diseased state. In Ayurvedic classics, we find many description regarding Medhya Rasayana which promote Pradnya (Dhi, Dhriti, Smriti) i.e. Acharya Charaka described four Medhya Rasayanas namely- Shankhapushpi, Guduchi, Mandukaparni and Yasthimadhu. Acharya Sushruta also mentioned some Divya Rasayanas. Besides, a number of other drugs have also been attributed with Medhya effect. Many such drugs have been scientifically studied in recent years and they have been reported to possess varying degree of anxiolytic activity along with

restoration of intelligence and memory and other no tropic effects.

In the present study an attempt was made to enhance the capacity of school going children by giving Medhya Rasayana. A chemical constituent Berberine present in Guduchi helps to prevent oxidation damage to bio molecules of Brain reduces peptides that interfere with Memory Function. A chemical constituent Volvoline present in Shankapushpi helps in increasing cognitive abilities. Triterpene present in mandukaparni is a neuroprotective and has anti oxidant properties. Jatamansi present in jatamansi is a Intellect promoter. Triterpenoids present in Brahmi suppresses ACHE activity resulting in enhanced cholinergic function, which in turn enhances attention and Memory processing and increases working Memory. Hence these drugs were included under study.⁶

The procedures followed here were economic efficient accessible and easily available which helped in toning of the mind and achieving the required goal by improving the IQ, Memory, and Performance.

OBJECTIVES OF THE STUDY

The present study is undertaken with the following Objectives:

- To Study in detail the concept of IQ according to Ayurveda and Modern science.
- To evaluate the scientific utility of Medhya Rasayana (MedhyaRasayana) in children with less IQ, Poor memory and Poor school performance.

INCLUSION CRITERIA

1. Students of either sex.
2. Students of 5th and 6th standard (10 to12yrs)
3. Students who were regularly attending classes.
4. Children with IQ score range 80:130

EXCLUSION CRITERIA

1. Subjects presented with learning disability, mental retardation, attention deficient hyperactivity disorder and personality disorders.
2. Subjects with Developmental disorders.
3. Subjects with psychiatric illness like anxiety, depression and any Metabolic Disorders
4. Systemic disorders.

METHODS

A comparative clinical study

Source of data:

The children who were mentally and physically healthy but with different levels of I.Q, were randomly selected for the study, from KLE's H F Kattimani (private kannada medium) school Hubli , between the age group of 10-12years.

The children were treated with Medhya Rasayana in one group and placebo in other group for a period of three months. The assessment of I.Q was done before commencement and after completion treatment.

SAMPLE SIZE:

100 students fulfilling the inclusion criteria, after the screening for Medha were selected and randomly categorized into two groups A and B, consisting of 50 students in each group.

Duration of the study: 3 Months.

Duration of the follow up: Weekly visit.

INTERVENTIONS:

Group - A

1. For kriminashanartha, Vidangarista 10ml BID with equal quantity of water

was administered, 30 minutes after food for 3days.

2. 250mg of Medhya Rasayana (MedhyaRasayana) 2 BID was administered with Godugdha after food.

Group – B

1. For kriminashanartha, Vidangarista 10ml BID with equal quantity of water was administered 30 minutes after food for 3 days.
2. Placebo s 250mg 2 BID was administered with Godugdha after food.

RESULTS

EFFECT OF THERAPY: Effect of therapy on Objective parameter I.Q using Binet Kamath Test, was assessed and obtained results were Statistically analyzed by applying student't' test.

In this present clinical study 100 Students were registered based on the inclusion criteria and categorized into 2 groups.

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GROUP	Mean		Difference in mean	Paired 't' test				Remarks
	BT (±SE)	AT (±SE)		S.D	S.E of mean	't'	P	
Group A	22.600 (1.043)	35.580 (1.067)	12.980	5.571	0.7879	16.474	<0.0001	SHS
Group B	24.500 (1.005)	30.760 (1.022)	6.180	4.805	0.6795	9.094	<0.0001	SHS

Efficacy of therapy on I.Q

Effect of therapy on I.Q in

Group A: The mean of I.Q Score before treatment was 22.600 which was increased to 35.580 after the treatment. The total effect of therapy provided statistically highly Significant (P< 0.0001) result with 't' value of 16.474 .

Effect of therapy on I.Q in

Group B: The mean of I.Q before treatment was 24.500 which was increased to 30.760 after the treatment. The total effect of therapy provided statistically Significant

(p<0.0001) result with 't' value of 9.094.

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Group A: The mean of I.Q Score before treatment was 22.600 which was increased to 35.580 after the treatment. The total effect of therapy provided statistically highly Significant ($P < 0.0001$) result with 't' value of 16.474 .

Effect of therapy on I.Q in Group

B: The mean of I.Q before treatment was 24.500 which was increased to 30.760 after the treatment. The total effect of therapy provided statistically Significant ($p < 0.0001$) result with 't' value of 9.094.

All the children considered for the study showed good improvement in I.Q in both the Groups, which was statistically highly significant in Group 'A' than in Group 'B'. Changes within the group were also found to be highly significant. Good improvement was seen in Memory, concentration in both the Groups.

Interpretation:

Medha confines in general to Grahana – Dharana – Smriti. Pitta is Ushna, Ashukari, Tikshna and enhances Satwa, which helps to retain or recapitulate the things. Therefore Pitta vardhak Ushna Virya drugs are

considered as Medhya drugs. Secondly kapha provides Dharana by Sthirata and Saumyatva and there by helps in retention of cognition. Hence ShitaVirya Kaphavardhak are quoted as Medhya drugs. So it can be said that UshnaVirya Medhyas are helpful mainly in Dharana functions.

In Ayurvedic literature the term 'Medha' has been used mainly in two aspect, one

which refers to the retention power (DharanavatiBuddhi) and the other refers to the grasping capacity of the individual (Grahana Shakti). In the process of acquiring knowledge grasping and retention plays an important role. Only properly grasped information can be further retained well and only well retained knowledge can be retrieved by memory. This emphasise the importance of Medha.

Discussion on MedhyaRasayana

A specific Rasayana formulation is named as MedhyaRasayana only when its utility

is meant for improving Medha in particular. Though all Rasayanas are said to be having Medhya effect, all are not named so because of above

said reason. The Rasayanas enhances the physical and psychological functions by improving the quality of body tissues. But for a specific action one has to take the Rasayana which is especially meant for producing that specific effect. Similarly MedhyaRasayanas are explained in order to get the Medhya effect in particular. Medhyarasayanas are known for their action on higher mental faculties like Buddhi, Medha etc.

In Ayurvedic literature many formulations are mentioned as MedhyaRasayana. Literally Medhya refers to the action by which Medha is benefited. MedhyaRasayanas can be used in conditions where Medha is brought into normalcy from decreased level or enhanced depending up on the condition. Ex: TheMedhyaRasayanas when used in children improves the medha, where as in JarajanyaSmrutinasha, these Rasayanas are used to preserve the mental faculties from furtherdeterioration.

The medhya drugs are considered to be prabhavajanya because some medhya drugs are

sheetavirya,madhuravipaka,madhura rasa e.gyastimadhu; and some are tikta rasa and ushnaviryae.gGuduchi. These dravya have more medhya karma rather than samanyadravya, so medhya karma is Prabhavajanya.

Grahanashakti (power of aquietion),dharanashakti(power of retention),smruti(power of recollection) all three are included in Medha.pitta is ashu and tikshna so it is helpful in vishayagrahana and smruti, that is why Medha is included in prakruta karma of pitta.vata is also necessary for association of ideas in the process of smruti.kapha provides Dhirti (Dharana) and stability that is why sthiriti and Dhriti are in included in prakrutakapha.

DISCUSSION ON PLACEBO:

Students receiving placebo also had good effect,probably due to the feeling amongst the recipients that it is a MedhyaRasayana. The very feeling of this kind has probably showed the desired effect as MedhyaRasayana.

The anupana mentioned for this particular yoga wasksheera, which is not only Medhya but also having balya, dhatuwardhana properties and satmya to children.

INTELLIGENT QUOTIENT:

Effect of therapy on I.Q in Group

A: The mean of I.Q Score before treatment was 22.600 which was increased to 35.580 after the treatment, which provided 57.43% improvement. The total effect of therapy provided statistically highly Significant ($P < 0.0001$) result with 't' value of 16.474 .

Effect of therapy on I.Q in Group

B: The mean of I.Q before treatment was 24.500 which was increased to 30.760 after the treatment, which provided 25.22% improvement. The total effect of therapy provided statistically Significant ($p < 0.0001$) result with 't' value of 9.094.

CONCLUSION:

1. After treatment period good result was observed in Group 'A' (Medhya Rasayana) than that of placebo group.
2. After follow up period, good result was seen in Group 'A' (Medhya Rasayana) than that of placebo group.
3. Overall result was good in Group 'A' (Medhya Rasayana).
4. Above study concludes that Medhya Rasayana gives significant improvement in school going children as compared to placebo tablet.

Total effect:

The total effect is considered as :
No Improvement < 25% Relief
Mild Improvement -26%-50% Relief
Moderate Improvement- 51%-75%
Marked Improvement > 75% relief
in the signs and symptoms after the overall therapy .

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Source of Support: NIL

Conflict of Interest : None declared

