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# A COMPARATIVE STUDY OF URINOC PLUS TABLET AND MEDHYA YOGA IN THE MANAGEMENT OF SHAYYAMUTRA

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#### **ABSTRACT**

Bedwetting is a widespread and distressing condition that can have a deep impact on the child/young person's behaviour and on their emotional and social life<sup>[1,2]</sup> It is particularly stressful for the parents or guardians. Children health needs great care as their physical and mental status helps them to build the future as well as nation. Parents and family members are frequently stressed by child's bedwetting. The brief description regarding *Shayyamutra* is found in *Sharangdhara*<sup>[3]</sup> and *Vangsena*.<sup>[4]</sup> The current issue was chosen for research and its treatment by using *Ayurvedic* principles due to the vast range of the disease in childhood. Maximum 60 patients in two groups attending O.P.D with bedwetting as presenting symptom were screened. **Objectives:** A comparative study of urinoc plus tablet and medhya

yoga in the management of *shayyamutra*. **Methods:** Group A (n=30) treated with urinoc plus tablet along with luke warm water while Group B (n=30) treated with *medhya yoga* along with luke warm water for 45 days. **Conclusion:** On the basis of overall effect the drug urinoc plus tablet have shown highly significant result in cardinal symptoms and associated symptoms of *shayyamutra*. No any specific adverse drug reaction were found in both the groups.

**KEYWORDS:** *Shayyamutra*, Enuresis, Bedwetting.

#### INTRODUCTION

Kaumarbhrityais one of the most important branch of Ayurveda. Kaumarbhritya is one among the 8 Angas of Ayurveda. This branch deals with neonatal care, infant feeding, immunity, diet for Children, problem related with infants and children. The practice of Kaumarbhritya starts right from birth of the baby upto he becomes capable of independent existence. This branch is the first hand of support offered by the science of Ayurveda to a new born on his arrival to this new world, to guide him towards a healthy living throughout the future. The behavioural problems like Shayyamutra (Bed - wetting), Nail biting, Stammering, Sleepwalking etc. in young children are quite common and arise from a complex interaction between child and environment. Now a days it is a proven fact that every disease have some psychological content and bedwetting one among them. Enuresis, is one of the obstinate problems of children, hence it needs utmost attention. The brief description regarding Shayyamutra is found in Sharangdhara and Vangsena. Enuresis is found limited in classical text book but the modern medicine has explained many aspects of enuresis. Modern medical science has become much alertand attentive towards such behavioural diseases. Bedwetting is a widespread and distressing condition that can have a deep impact on the child/young person's behaviour and on their emotional and social life. It is also particularly stressful for the parents or guardians. Primary enuresis occurs when a child has never established bladder control and Secondary enuresis occurs when a person has established bladder control for a period of 6 months. Night time incontinence, otherwise known as nocturnal enuresis, is a common condition that can cause substantial psychological distress in children with the condition. Nocturnal enuresis is defined as nighttime bedwetting in children five years of age or older.<sup>[5]</sup>

#### **Epidemiology**

The prevalence at age 5years is 7% for males and 3% for females. At age 10, it is 3% for males and 2% for females and at age 18, it is 1% for males and extremely rare for females. 9,10 More than 85% children will have complete diurnal and nocturnal control by 5years of age. The remaining 15% gain continence at a rate of approximately 15% per year. By adolescence, 0.5-1% children continue to have enuresis. Twin studies show a marked familial pattern with documented concordance rates of 68% in monozygotic twins and 36% is dizygotic twins. Approximately 60% of children with nocturnal enuresis are boys. Family history is positive in 50% of cases. Although primary nocturnal enuresis may be polygenic, candidate genes have been localized to chromosomes 12 and 13. If one parent was enuretic,

each child has a 44% risk of enuresis. If both parents were enuretic, each child has a 77% likelihood of enuresis. Nocturnal enuresis without overt day time voiding symptoms affect up to 20% 0f children at the age of 5years. It ceases spontaneously in approximately 15% of involved children every year thereafter.<sup>[8,9]</sup>

### **Aim and Objectives**

- 1. To evaluate the effect of Urinoc plus Tablet in Shayyamutra (Enuresis).
- 2. To evaluate the effect of *Medhya yoga* in *Shayyamutra* (Enuresis).
- 3. To compare the effect of Urinoc Plus Tablet and *Medhya Yoga* in the management of *Shayyamutra* (Enuresis).
- 4. To collect literature of *Shayyamutra* from *Ayurveda* and modern.
- 5. To evaluate the effect of *Pathya-Apathya* counseling in the management of *Shayyamutra*.

#### MATERIAL AND METHODS

### **Ethical clearance**

The proposed clinical study was presented in form of synopsis in front of institutional ethics committee. The clinical trial was started after the approval from chairperson of ethics committee.

## Sample size

Maximum 60 patients in two groups attending O.P.D with bedwetting as presenting symptom were screened. A diagnosis was made based on pratyatmaka linga. The case were equally distributed into two groups by using open randomization method.

## **Inclusion criteria**

- Children of either sex belonging to age group 5 to 15 years.
- Children having cardinal features of Shayyamutra.
- Children with repeated voiding of urine in bed or clothes at least more than 2 times in a
  week.

#### **Exclusion criteria**

- Age below 5 years and above 15 years.
- Patients having systemic disorders like TB, DM, Adrenal gland disbalance will be excluded from the study.

- Patients having any congenital anomalies or with anatomical defect of genito-urinary system.
- Whenever a patient present with the complaint of bed wetting, we will give them Albendazole for deworming. If patient recover from this then we put them in exclusion Criteria. Dose: 400mg single dose for children above 2 years.
- Neurological disorders like Cerebral Palsy, MR, Spina bifida.

## **Methods**

Group A = 30 patient – Treated with urinoc plus tablet

Group B = 30 patient – Treated with medhya yoga

#### Method of treatment

Plan of intervention: (For both groups)

Dose: Dose will be fixed according to Young's rule:

Adult dose × Child Age(in years)

Child Age(in years)+ 12

Duration of treatment- 45 days.

Route- Oral.

Aushadha kala- After meal.

Anupana- Luke warm water.

Duration of treatment- 45 days.

Follow Up- Follow up will be done fortnightly for 45 days.

## **OBSERVATIONS**

Total 66 patients registered, 60 completed and 6 discontinued. Out of the 6 discontinued patients, 4 patient from Group A and 2 from Group B. 65% were male and 35% were female. Total 66 patients registered, 60 completed and 6 discontinued. Out of the 6 discontinued patients, 4 patient from Group A and 2 from Group B. 78.3 % patients reported deep and sound sleep.

2423

# **Clinical study**

Table 1: Effect of therapy on Cardinal and Associated symptoms in Group A.

Group (A)		Mean	N	S.D.	S.E.	% Change	% Wilcoxon Change W		Result
Cardinal	BT	4.07	30	0.94	0.17		-4.837 <sup>b</sup>	<b>Value</b> 0.000	HS
symptom	AT	0.87	30	1.17	0.21	78.62		00132	
Frequency of	BT	1.43	30	0.68	0.12			0.000	
Bed wetting per night	AT	0.43	30	0.50	0.09	69.93	-4.456 <sup>b</sup>	0.000	HS
Lack of	BT	0.10	30	0.31	0.06			0.3173	
memory presentation	AT	0.07	30	0.25	0.05	30.00	-1.000 <sup>b</sup>	1051	NS
Shamefulness	BT	1.03	30	0.49	0.09	93.20	-5.209 <sup>b</sup>	0.0000	HS
Presentation	AT	0.07	30	0.25	0.05	93.20	-3.209	0019	113
Irritability	BT	1.00	30	0.45	0.08	97.00	-5.209 <sup>b</sup>	0.0000	HS
presentation	AT	0.03	30	0.18	0.03	97.00	-3.209	0019	
lack of	BT	0.17	30	0.65	0.12	82.35	-1.342 <sup>b</sup>	0.1797	NS
concentration	AT	0.03	30	0.18	0.03	02.33		1249	
Excessive	BT	0.30	30	0.70	0.13	56.67	-1.890 <sup>b</sup>	0.0587	NS
activity	AT	0.13	30	0.35	0.06	30.07	-1.070	8172	
Fear	BT	0.00	30	0.00	0.00	0.00	$.000^{c}$	1.0000	NS
presentation	AT	0.00	30	0.00	0.00	0.00	.000	0000	140
Progress chart	BT	1.33	30	0.55	0.10		,	0.000	
frequency of B.W	AT	0.40	30	0.50	0.09	70.00	-4.460 <sup>b</sup>	0.000	HS

Since observations are on ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy in Group A. From above table, we can observe that P-Value for almost parameters is less than 0.001. Hence, we can conclude that, effect observed is highly significant.

Table 2: Effect of therapy on Cardinal and Associated symptoms in Group B.

Group (B)		Mean	N	S.D.	S.E.	% Change	Wilcoxon W	P- Value	Result
Cardinal	BT	3.80	30	0.81	0.15			0.000	
symptom (Bed wetting)	AT	1.00	30	0.45	0.08	73.68	-4.914 <sup>b</sup>	00089	HS
Frequency of	BT	1.53	30	0.63	0.11			0.000	
Bed wetting per	AT	0.37	30	0.49	0.09	75.82	-4.882 <sup>b</sup>	0.000	HS
night	AI	0.57	30	0.49	0.09			00103	
Lack of memory	BT	0.10	30	0.55	0.10	70.00	-1.000 <sup>b</sup>	0.317	NS
presentation	AT	0.03	30	0.18	0.03	70.00	-1.000	31051	110
Shamefulness	BT	1.87	30	0.35	0.06	90.91	-5.007 <sup>b</sup>	0.000	HS
Presentation	AT	0.17	30	0.38	0.07	90.91	-3.007	00055	пъ
Irritability	BT	0.83	30	0.46	0.08	96.39	-4.899 <sup>b</sup>	0.000	HS
presentation	AT	0.03	30	0.18	0.03	90.39	-4.077	00096	110

lack of	BT	0.30	30	0.79	0.15	33.33	-1.342 <sup>b</sup>	0.1797	NS
concentration	AT	0.20	30	0.66	0.12	33.33	-1.342	1249	11/0
Excessive	BT	0.37	30	0.85	0.16	37.84	-1.633 <sup>b</sup>	0.1024	NS
activity	AT	0.23	30	0.63	0.11	37.84	-1.033	7043	11/2
Eggr progentation	BT	0.00	30	0.00	0.00	0.00	-1.000 <sup>b</sup>	0.3173	NS
Fear presentation	AT	0.00	30	0.00	0.00	0.00	-1.000	1051	11/2
Progress chart	BT	1.33	30	0.55	0.10			0.0000	
frequency of B.W	AT	0.40	30	0.50	0.09	70.00	-4.882 <sup>b</sup>	0105	HS

Since observations are on ordinal scale (gradations), we have used Wilcoxon Signed Rank Test to test efficacy in Group B. From above table, we can observe that P-Value for almost parameters is less than 0.001. Hence, we can conclude that, effect observed is highly significant.

# Comparisonbetween Group-A and Group-B

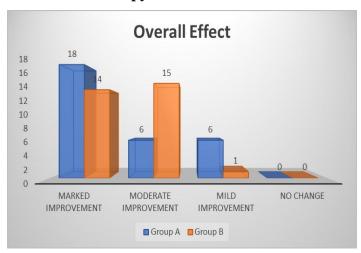
Variable	Charm	N	Mean	Sum of	Mann-	P-
Variable	Group	IN.	Rank	Ranks	Whitney U	Value
Cardinal	Group A	30	32.70	981.00		
	Group B	30	28.30	849.00	384.000	0.3142
symptoms	Total	60				
Frequency of	Group A	30	27.88	836.50		
Bed wetting	Group B	30	33.12	993.50	371.500	0.1707
per night	Total	60				
Lack of	Group A	30	30.48	914.50		
memory	Group B	30	30.52	915.50	449.500	0.9810
presentation	Total	60				
Chamafulass	Group A	30	20.20	606.00		0.0000
Shamefulness presentation	Group B	30	40.80	1224.00	141.000	
	Total	60				
Irritability presentation	Group A	30	32.90	987.00		0.0857
	Group B	30	28.10	843.00	378.000	
	Total	60				
Lack of	Group A	30	30.52	915.50		0.9864
concentration	Group B	30	30.48	914.50	449.500	
Concentration	Total	60				
Excessive	Group A	30	30.98	929.50		
activity	Group B	30	30.02	900.50	435.500	0.7003
activity	Total	60				
Fear presentation	Group A	30	30.00	900.00		
	Group B	30	31.00	930.00	435.000	0.3173
	Total	60				
Progress chart	Group A	30	27.65	829.50		
frequency of	Group B	30	33.35	1000.50	364.500	0.1347
B.W	Total	60	-			

Mann Whitney U Test is carried out for comparison between Group A and Group B. From above table, we can observe that, P-Value for almost parameters is greater than 0.05. Hence, we can conclude that, there is no significant difference between Group A and Group B.

## Overall effect of therapy

Overall offeet		Group A	Group B		
Overall effect	N	%	N	%	
Marked Improvement	18	60.00%	14	46.67%	
Moderate	6	20.00%	15	50.00%	
Improvement	U	20.00%	13	30.00%	
Mild Improvement	6	20.00%	1	3.33%	
No Change	0	0.00%	0	0.00%	
TOTAL	30	100.00%	30	100.00%	

Graph no. 41: Overall effect of therapy



In **Group A**, None of the patient were completely cured, marked improvement was observed in 18 patients, moderate improvement in 6 patient, mild improvement in 6 patients of Shayyamutra.

In **Group B**, none of the patients were completely cured, marked improvement was observed in 14 patients, moderate improvement in 15 patients, mild improvement in 1 patient of Shayya-mutra.

#### **DISCUSSION**

The research work was conducted to see the efficacy of urinoc plus tablet & medhya yoga in the management of shayyamutra. Shayyamutra is considered as a shameful problem in our society and it is most under diagnosed condition by the paediatrician, as it is known as self limiting in nature. It has credited to hamper the child's self-esteem and further long term

complication like over activity, underachievement insecurity, clumsiness etc. It may create problem for their social and emotional development. Acharya Adhamalla, [10] in his Gudharthadipika commentary says that regarding shayyamutra the classics have described only one cardinal symptom that is self evident in the name itself.

"रात्रौ स्वप्नावस्थायाम् शय्यागतो बालोऽक्षीणपूर्वकम् मूत्रयति दोषप्रभावात।"

(Addhamallakrita dipika tika, S.Sa.Pu 7/184)

Thus the disease with the symptom of Bedwetting or in other words the disorder in which the child urinates in bed is known as Shayyamutra. Here, it would be good to clarify the word shayyamutra, as it means not only means Bed wetting in night but also bed-wetting during the day time. However as shown in the quotation of Acharya Adhamalla it certainly indicates the nocturnal enuresis.

## **Discussion on drugs**

The study drug Ayurvedic Compound (Urinoc plus tablet) is a hypothetical compound containing jambu, kala tila, kuchala, Ashwagandha, Amara & Bimbi mool. These drugs have varying degree of psychotropic action and are known to possess antidepressant, sedative and tranquilizing action.

Medhya yoga (Brahmi, Shankhpushpi, Guduchi, Yashtimadhu) These four drugs have been given prime importance by Charaka Acharya in chikitsa sthana. In the present study all four medhya medicine has taken up for evaluating its efficacy in the treatment of shayyamutra.

## Jambu<sup>[11]</sup>

In the present study the drug was selected from Charaka Samhita. As per the classical reference of the text, the drug is having kashaya and madhur rasa, Amla Anurasa, katu vipaka, virya is sheeta and having laghu, ruksha Guna. Charaka have mentioned it as a Mutrasangrahaniya, or it may have the properties to reduce urine formation or it may arouse the child on having sensation of bladder fullness and thereby being effective in the present study.

# Kala tila<sup>[12]</sup>

This drug was selected from Sushruta Samhita. As per the classical reference of the text, the drug is having Kashaya, Madhur, Tikta, Katu Rasa, Madhur Vipaka, Sushruta have mentioned it as a sangrahi, Alpamutrakaranam i.e. reduces the urine. Charaka Aacharya have mentioned it as *Badhvidmutram na che sleshmaabhivardhnama*. *Kala tila* also have *Medhya* properties.

# Kuchala<sup>[13]</sup>

It is a Nervine tonic and central nervous system (CNS) stimulant. It reduces *Kapha* and *Vata*. As per the classical reference of the text, the drug is having *Kashaya*, *Madhur*, *Tikta*, *Katu Rasa*, *Madhur Vipaka*. *According to* Aacharya Bhavprakesh it is very effective in *shayyamutra*.

# Ashwagandha<sup>[14]</sup>

It is natural dietary supplement for maintaining health and well-being. It is also used in stress, weakness, fatigue which is psychological reasons of bedwetting.

In Charaka Samhita, Sutra-sthana, Shadvirechanasheetiyadhayayam 4/9-10, Ashvagandha is mentioned in Brihmaniye and Balya Mahakashaye. Ashvagandha is mentioned as Vata Shamaka in Chikitsa-sthana, Vaatavyadhichikitsadhayayam. Acharaya Shushruta has indicated Ashvagandha in Shosha because of its properties of Balya and Brihmana. [15]

# Amra beeja majja<sup>[16]</sup>

In the present study the drug was selected from *Charaka Samhita*. As per the classical reference of the text (nighatu), the drug is having *kashaya* and *madhur rasa*, *kinchit Amla*, *katu vipaka*, *virya* is *sheeta* and having *Sangrahi Guna*. *Charaka* have mentioned it as a *Mutrasangrahaniya*.

# Bimbi moola<sup>[17]</sup>

In Bhaishajya Ratnavali Bimbimoola is indicated in Shayyamutra from the chapter Kshudra rogachikitsadhikara. Bimbi, Coccinia indica is a climber of cucerbetaceae family and is included by Acharya Charaka in mulini gana while in urdhvabhaghara gana by Acharya Shusruta.

## Brahmi<sup>[18]</sup>

Brahmi is an excellent Medhya drug among all the Medhya Rasayana drugs. Almost all the Acharayas indicated the use of Brahmi in various psychiatric problems as well as to enhance memory, intelligence, longevity and strength. Acharaya Charaka recommended the use of Brahmi Ghrita in Apasmara. The same is indicated by Acharaya Kashyapa for promoting

child's intellect. Acharaya Kashyapa in Lehadhayaya has given Brahmi an important place among Medhya drugs.

# Shankhapushpi<sup>[19]</sup>

Shankhapushpi is considered as medhya rasayana in charaka samhita. It is a reputed drug of Ayurveda and reported as a brain tonic, nervine tonic, urinary disorder. In the present study the drug was selected from *Charaka Samhita*. As per the classical reference of the text, the drug is having Tikta and madhur rasa, Madhura vipaka, virya is sheeta and having Guru, Snigdha Guna.

# Yashtimadhu<sup>[20]</sup>

The major constituent useful in brain function is glabridin. Chemically it is a flavonoid polyphenol which is proven to attenuate cerebral injuries in stroke as it is neuroprotective. It is also proved in animal studies that it enhances memory retention. Since scopolamine induced amnesia was reversed by liquorice, it is possible that the beneficial effect on learning and memory may be because of facilitation of cholinergic transmission in brain. In effect of therapy statistically both the groups showed highly significant result on cardinal symptom (Bed wetting) which was rarely strikingly similar. But according to percentage of improvement in the urinoc plus tablet i.e Group-A found 78.62% whereas in Group-B i.e. Medhya yoga found 73.68% relief in Cardinal symptom.

In groupA, memory was improved by 30.00%, Shamefulness was relieved by 93.20%, Irritability by 97.00%, lack of concentration by 83.35%, Excessive activity by 57.84%.

In **groupB**, the memory was improved by 70.00%, shamefulness was relieved by 90.91%, Irritability by 96.39, lack of concentration by 33.33%, Excessive activity 36.36%.

Mann Whitney U Test is carried out for comparison between Group A and Group B. We can observe that, P-Value for almost parameters is greater than 0.05. Hence, we can conclude that, there is no significant difference between Group A and Group B.

#### **CONCLUSION**

- > In Group A, None of the patients were completely cured, marked improvement was observed in 18(60.00%) patients, moderate improvement in 6 (20.00%) patients, Mild improvement in 6 (20.00%) patients of *Shayyamutra*.
- > In Group B, none of the patients were completely cured, marked improvement was observed in 14 patients, moderate improvement in 15 patients, mild improvement in 1 patients of Shayya-mutra.

> On the basis of result on Cardinal symptoms and associated symptom of *Shayyamutra*, we can concluded that Urinoc plus tablet is more effective in the management of Shayyamutra and there was no side effect seen on any patients of trial of drug.

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