

CLINICAL STUDY OF MANDUKPARNYADI YOG ON SHAYYA MUTRA (ENURESIS)

Dr. Ambikaprasad Pandey*¹, Dr. Deepak S. Khawale² and Dr. Sudha Singh³¹Assistant Professor, Department of Kaumarbhritya, Ankerite Ayurvedic Medical College, Lucknow.²Professor and Head of Department, Department of Kaumarbhritya, Dr. D.Y. Patil College of Ayurved and Research Centre, Pimpri, Pune.³Associate Professor, Department of Kaumarbhritya, P.D.E.A.'s College of Ayurved and Research Centre, Akurdi, Pune.

*Corresponding Author: Dr. Ambikaprasad Pandey

Assistant Professor, Department of Kaumarbhritya, Ankerite Ayurvedic Medical College, Lucknow.

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ABSTRACT

Behavioral 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. Passing of urine in clothes or bed even after attaining age of 5 years is enuresis. Limited references are found in the ayurvedic texts about Shayya Mutra; hence, there is a need for study in this area. As lack of reliable treatments both in modern sciences this new drug combination 'Mandukparnyadi Yog' has been evaluated for enuresis and encouraging result has been obtained.

KEYWORDS: Shayya Mutra, Bedwetting, Enuresis, Mandukparnyadi Yog.**INTRODUCTION**

As per Fifth edition of Diagnostic & Statistical Manual of Mental Disorders (DSM-V): the behavior enuresis is clinically significant as manifested by either a frequency of atleast twice a week for atleast 3 consecutive months when age is at least 5 years. 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 18years, it is 1% for males and extremely rare for females. Imipramine (Tofranil) 25-50 mg/kg and desmopressin acetate (DDAVP) 200-600 mcg are drugs generally used for enuresis. But high cost, high relapse rate and side effects of these drugs make them less usefull and reliable. Other therapies like toilet training, alarm therapy etc are available but still drug therapy is a need for serving the purpose.

In Ayurveda, Sharandhar Samhita just mentions Shayya Mutra disease as a single word in list of 22 bal vadhis and there are limited formulations/herbs directly mentioned for this disease. Bhaishajya Ratnavali has mentioned the complaint of Shayya Mutra but used Ahiphen (opium) as a drug in the treatment, which cannot be used easily in current era. Few other herbs like Kuchala, Bimbimool (Coccinia indica) and Chameli mool (Jasminum officinale) mentioned are indicated for Shayyamutrata.

Hence, the was a need for new drug combination (hypothetical) to treat Shayya Mutra (Enuresis).

Hypothesis

There is no description regarding Nidana, Samprapti, Rupa of Shayyamutra available in the classics. It is considered as multifactorial behavioral disorder in contemporary medicine. The hypothesis that is considered in this research is that Shayyamutra is caused by main three factors lack of control by brain, weakness of the bladder and its muscles and worm infestation. And if these factors are managed duely, then these bedwetting occurrences will eventually end.

AIMS

- To evaluate the effect of the Mandukparnyadi yog on Shayyamutra (Enuresis).

OBJECTIVES

- To study the disease Shayyamutra (Enuresis) in detail.
- To compare the above effect with "Mentat Syrup" as a control.
- To observe any other effect of the therapy.

Results will be drawn by assessment of the number of dry nights after the treatment.

MATERIALS AND METHODS

Patients presenting with the symptoms of Shayyamutra (enuresis) were randomly selected from OPD of Dr. D.Y. Patil College of Ayurved, Pimpri.

Inclusion criteria

Children of age group 5 years to 14 years of either sex with history of bedwetting for 3 consecutive months.

2) Patients with any Congenital anomalies or disorders.
CNS disorders Epilepsy Spina Bifida
Diabetes Mellitus Diabetes Insipidus Urinary Tract Infections

Exclusion Criteria

1) Patients other than the above mentioned age group.

Criteria of Assessment

| Normal Micturation / No Bed wetting | 0 |
|-------------------------------------|---|
| Once a week | 1 |
| Twice a week | 2 |
| Thrice a week | 3 |
| Four times a week | 4 |
| Five times a week | 5 |
| Six times a week | 6 |
| Once or more than once daily | 7 |

Effect of therapy was assessed on the basis of improved status in the number of times of bedwetting per week

Assessment Parameters**Materials**

In this study 10 drugs were taken, their kwath was made and then finally granules were made from them. Drugs and parts used are given below:

| Sr.No. | Ingredient | Latin Name | Quantity | Part used |
|--------|---------------|-------------------------|----------|------------------------|
| 1 | Mandukparni | Centella asiatica | 1 Part | Whole plant |
| 2 | Sankhapushpi | Convolvulus pluricaulis | 1 Part | Whole plant |
| 3 | Kushmanda | Benincasa hispida | 1 Part | Fruit |
| 4 | Vidanga | Embelia ribes | 1 Part | Fruit |
| 5 | Kampillak | Mallotus philippensis | 1 Part | Whole |
| 6 | Ashwagandha | Withania somnifera | 1 Part | Root |
| 7 | Bala | Sida cordifolia | 1 Part | Root |
| 8 | Haritki | Terminalia chebula | 1 Part | Fruit |
| 9 | Amrafal Majja | Mangifera indica | 1 Part | Internal part of fruit |
| 10 | Bimbimool | Coccinia indica | 1 Part | Root |

Method of Administration

| | Trail Group | Control Group |
|-----------|---|---|
| Drug | Mandukparnyadi Yog | Syrup Mentat |
| Dose | Acc. To Clark's Formula BD | 5ml BD |
| Route | Oral | Oral |
| Anupana | Milk | - |
| Duration | 2 months | 2 months |
| Follow Up | 15 th , 30 th , 45 th , 60 th day | 15 th , 30 th , 45 th , 60 th day |

OBSERVATIONS AND RESULT

➤ Statistical analysis of Trial group

Showing frequency of bedwetting in the Trial group

Table: Frequency of Bedwetting (Trial Group)

| S No | Frequency (per week) | Before Treatment | DAY_15 | DAY_30 | DAY_45 | DAY_60 |
|------|----------------------|------------------|-----------|-----------|-----------|-----------|
| 1. | 0 | 0 | 0 | 9 | 24 | 27 |
| 2. | 1 | 0 | 2 | 13 | 5 | 3 |
| 3. | 2 | 0 | 7 | 8 | 1 | 0 |
| 4. | 3 | 0 | 17 | 0 | 0 | 0 |
| 5. | 4 | 10 | 4 | 0 | 0 | 0 |
| 6. | 5 | 17 | 0 | 0 | 0 | 0 |
| 7. | 7 | 3 | 0 | 0 | 0 | 0 |
| | Total | 30 | 30 | 30 | 30 | 30 |

It can be seen in the current study that total 27 number of patients of the trial group had their symptom of bedwetting reduced to zero bedwetting per week at the end of the trial. While 3 patients whose bedwetting was not cured but significantly reduced to one bedwetting per

week.

- Statistical analysis of the Control group
- Showing statistical analysis of the control group.

Table: Frequency of Bedwetting (Control Group)

| S No | Frequency (per week) | Before Treatment | DAY_15 | DAY_30 | DAY_45 | DAY_60 |
|------|----------------------|------------------|--------|--------|--------|--------|
| 1 | 0 | 0 | 0 | 0 | 4 | 12 |
| 2 | 1 | 6 | 7 | 12 | 11 | 4 |
| 3 | 2 | 8 | 9 | 6 | 7 | 8 |
| 4 | 3 | 8 | 7 | 6 | 3 | 1 |
| 5 | 4 | 2 | 1 | 1 | 3 | 4 |
| 6 | 5 | 5 | 5 | 5 | 2 | 1 |
| 7 | 7 | 1 | 1 | 0 | 0 | 0 |
| | Total | 30 | 30 | 30 | 30 | 30 |

In the control group there were 12 patients whose bedwetting per week finally reached 0 bedwetting per week stage.

➤ **UNPAIRED T TEST**

Showing application of Unpaired T test on control and trial groups.

Test: Unpaired t-test between Control and Trial group at various intervals.

| | | Before Treatment | 15th Day | 30th Day | 45th Day | 60th Day |
|---|---------|--------------------|-----------------|------------------|-------------------|------------------|
| Mean | Control | 2.87 | 2.73 | 2.37 | 1.87 | 1.47 |
| | Trial | 4.87 | 2.77 | 0.97 | 0.23 | 0.1 |
| | p value | 0.00000017* | 0.9176** | 0.000034* | 0.0000010* | 0.000045* |
| * - Statistically significant ** - Statistically Not significant | | | | | | |

It can be seen in the present study that, In the control group the mean before treatment was 2.87 which was gradually reduced to 1.47 on the 60th day of the trial. Also, In the trial group mean before treatment was 4.87 which was gradually reduced to 0.1 on the 60th day of the trial.

analysis would be discussed for every follow up wise for both the groups.

This means that the drugs given in the trial and control group were both effective.

Before Treatment

- In the control Group there were no patients without bedwetting, 6 patients with bedwetting once a week, 8 patients with bedwetting twice or thrice a week, 2 patients with bedwetting four times a week, five patients with bedwetting five times a week, 1 patient with bedwetting 7 or more than 7 every week.
- In the trial group there were no patients with no bedwetting and once twice and thrice a week, 10 patients with bedwetting 4 times a week, 17 patients with bedwetting 5 times a week, 3 patients with bedwetting 7 or more times a week.

But if we see after comparing patients of both the groups, we can see that the pace or the rate at which mean of the trial group has reduced; this shows that the treatment received by the trial group was far more effective than the treatment received by the control group.

On the 1st follow up or 15th day

- In the control group there were no patients without bedwetting, 7 patients with bedwetting once a week (BT was 6), 9 patients with bedwetting twice a week (BT it was 8), 7 patients with thrice bedwetting a week, 1 patient with bedwetting four times a week. It can be seen that number of bedwetting has been started getting reduced, though with a very slow rate but definitely the status of patients have improved.
- In the trial group 2 patients with bedwetting 1 time a week, 7 patients with bedwetting 2 times a week, 17 patients with bedwetting thrice a week, No patients

Discussion Regarding Effect of the Therapy

As already mentioned that the study was conducted under two groups viz. Control Group (30 Patients) receiving Syrup Mentat and Trial Group (30 Patients) receiving “Mandukpamyadi Yog”

The effect of the therapy was assessed on the basis of reduction in the number of times of bedwetting in a week. For the purpose of making comparison between pre and post treatment, the history of bedwetting in last one week was documented.

For sake of better expression and understanding the

with 5,6 and 7 times bedwetting per week. In this group the bedwetting status is seen improving at a fast rate.

On the 2nd follow up or 30th day

- In the control group 12 patients with bedwetting once a week, 6 patients with bedwetting 2 to 3 times a week, 5 patients with bedwetting 5 times a week. The rate of improvement is slow
- In the trial group 9 patients have already achieved Zero bedwetting status, 13 patients with bedwetting only once 1 week, 8 patients with bedwetting twice a week, No patients now have 3-7 times bedwetting. As we can see the improvement rate is very good and already 9 patients have achieved) bedwetting status.

On the 3rd follow up or 45th day

- In control group the improvement rate is slow but steady and 4 patients have achieved bedwetting status
- In the trial group 24 patients have achieved bedwetting status, only 5 patients with bedwetting once a week and no patients with 2-7 times bedwetting per week.

On the 4th follow up or 60th day

- In the control group 12 patients achieved bedwetting status and rest patients although have an improvement in their bedwetting status but could not achieve complete cure of there bedwetting
- In the trial group 27 patients achieved 0 bedwetting status and 3 patients had tremendous improvement in their bedwetting status.

The trial drug compound “Mandukparnyadi Yog” possess multiple properties like Balya, Rasayana, Medhya, Srotoshodhaka, Mutrasangrahan, Krimighna etc. Due to which some patients showed additional improvements in their school performance, concentration ability, stress etc.

MODE OF ACTION OF THE MANDUKPARNYADI YOG

Effect of the drug attained in the present study can be explained by multiple mechanism of actions of its ingredients. The ingredients have mainly Madhura, Tikta and Kashaya rasa; Laghu and snigdha guna, Madhura vipaka; medhya rasayana, balya, krimighna, mutrasangrahaniya and Tridosh shamak properties.

Talking about the rasa; madhura and tikta rasa exhibit medhya property. Madhur vipaka and sheeta virya also enhance medhya effect. Laghu guna dispels the avarana of tama due to its kaphaghna properties.

It also acts as strotoshodhak drvaya which may help in breaking down the samprapti of Shayyamutra. Therefore, it helps to clear margavrodha of Prana Vata and controls atinidra. The krimighna nature of vidanga in this

compound acts in curing the worm infestation which also might be the cause for bedwetting. The srotoshodhalk property may increase the circulation in brain tissues. The tikta and Kashaya rasa exhibit mutra sangrahi (anti-diuretic) effect. Sheeta virya also exhibits this property therefore, polyuria is controlled by these properties of the drugs. Madhura rasa, snigdha guna and sheeta virya exhibit balya, brimhana and rasayana properties which strengthen the nervous system and also are able to strengthen the bladder and its muscles and sphincters. Therefore frequency of micturition is controlled by these properties.

CONCLUSION

Shayyamutra is a common socially disruptive problem. Ayurvedic literature has very brief description of Shayyamutra. Vitiation of Vyana Vayu, Samana vayu and Apana Vayu and Vikriti in Manovaha Srotas are main factors responsible for development of Shayyamutra. Vata – Pitta trait of patients were seen more prone to shayyamutra which is another topic for research.

Mandukparnyadi Yog proved to be more effective than Syrup Mentat in this study. As this dissertation is time bound project, hence further studies are necessary to evaluate the effect of Mandukparnyadi Yog with more techniques, more points of consideration and a longer duration and large number of patients. The granular form of the compound and chocolate flavor added to the palatability of the compound. So granular form seemed to be best in the era of Bournvita, Horlicks and other products in the market.

Even if this study being conducted on a small scale, still the results and outcome was very enthusiastic.

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