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Ayurvedic Management of Incontinence of Urine in Aged

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ABSTRACT

Urinary incontinence is defined as the involuntary loss of urine, sufficiently severe to cause a social or hygiene problem. It becomes more prevalent in old age mainly after 60 years of age. In Ayurveda, this condition can be concluded under the heading of predominant *vata* disorders. In old age *Vata* aggravated and creates this condition. For the first time we aimed to evaluate the principle potential of the traditional Ayurvedic approach for the overall clinical outcomes in incontinence of urine in aged. The observational clinical study with 15 patients was conducted at P.D. Patel Ayurveda Hospital, Nadiad, India. Patients were treated with *Bala moola kvath*, *Narayanaa* oil orally for one month period along with *narayanaa* oil *abhyanga*, *nirgundi patra baspasvedana*, *narayana* oil *matrabasti*. Patients were trained for Kegel exercise and advised to do it for 15 minutes twice every day. Moreover, dietary advice was given. Total duration of the treatment was of 1 month along with 2 months of follow-up period. Assessment was done on the basis of grade score prepared for the urgency and incontinuity of urine. Disturbances in daily routine activities also assessed with the help of King's Health Questionnaire. Statistically significant improvement was noticed in incontinence of urine by 66.6% and in urine urgency by 57.14%. Affected daily activities due to incontinence were also improved. No any unwanted sign or symptom was noticed and the signs and symptoms of the disease as well as daily activities improved in the follow-up period.

KEYWORDS *Urinary Incontinence, Matrabasti, Kegel Exercise, Abhyanga, Baspasvedana*



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INTRODUCTION

Urinary incontinence is the loss of bladder control. This means that one can't always control when urinate. Urinary incontinence can range from leaking a small amount of urine (such as when coughing or laughing) to having very strong urges to urinate that are difficult to control.

Aging causes a number of changes in urinary tract physiology like decreasing bladder elasticity, urethral closing pressure and strength of the detrusor muscle, all of which can affect continence¹. In addition, with age, the kidneys become less efficient at concentrating urine, causing an increase in urine volume. Main causative factors for incontinence of urine in old age are acute confusional state, urinary tract infection, some medications, faecal impaction, restricted mobility and detrusor over activity caused by damage to central inhibitory centers or local detrusor muscle abnormalities.²

Millions of adults have urinary incontinence. It is most common in people over 65 years old, especially women. In aged people urinary incontinence is mainly of urge or stress or both types. Numerous epidemiologic studies show that the incidence of urinary incontinence increases with age³⁻⁸ with the range of prevalence

estimates among community dwelling patients varying enormously (2–58%).⁹⁻¹²

The lower prevalence of urinary incontinence in institutionalized patients is even higher, with many authors suggesting a prevalence of 40–60%. Despite these high prevalence rates, urinary incontinence is not a static condition. Rather it is a dynamic condition whereby significant incidence rates are associated with equally significant remission rates, and patients move back and forth from continence to incontinence¹³.

Treatment of this condition available in allopathic medicine have not satisfactory role in achieving the success in addition to their adverse effects. Owing to the above mentioned problems of management, it is imperative to explore newer efficacious drugs of procedures to tackle such disease entities.

AIMS AND OBJECTIVES

The present study was aimed to establish clinically, the effect of Ayurvedic multi-modal treatment which consist oral medicines i.e. *balamoola kvatha* with *narayana taila* and *abhyanga*, *baspasvedana* with *narayana taila matrabasti* as well as specific Kegel exercise in the aged patients of urinary incontinence.



Effect of this treatment on daily life style with the help of improvement noticed in King's Health Questionnaire was also an objective of this study.

MATERIALS AND METHODS

Selection of the patient

All patients meeting the criteria (see below) were selected from both the out-patient department (OPD) and the in-patient department (IPD) of the P. D. Patel Ayurved Hospital in Nadiad, India (Teaching hospital of the J. S. Ayurved College).

Criteria for inclusion

- Positive patient's history and established diagnosis of incontinence of urine due to age related changes.
- Patients having 60 and above 60 years of age.

Criteria for exclusion

- Patients with notable diseases like UTI, prostate enlargement, cystocele, vaginal prolapse, other neurogenic organic diseases like multiple sclerosis, stroke, motor neurone diseases etc and has prostatectomy done were excluded from the study.
- Patients having associated diseases like diabetes mellitus, cerebral vascular stroke were also excluded.

Criteria for diagnosis

- Each and every patient were selected with the pattern of micturition that defining the incontinence of the urine with the help of criteria given by the ICI (International consultation on incontinence's).¹⁴
- General neurological assessment was also done to exclude the patient suffered from disorders like multiple sclerosis, and the lumbar spine should be inspected for features of spina bifida occulta etc.
- Rectal examination was done for prostatic enlargement in men.
- Genital examination was done in female for cystocele or rectocele or mucosal atrophy of vagina.
- Urine routine & microscopic examination was done for UTI or other disorders.

Study protocol and timelines

Patients were treated in both OPD and IPD. Total 15 patients with incontinence of urine were screened and all the patients' data sets were completely recorded.

The main assessment period was 1 month. Patients were advised to continue all Āyurvedic medicaments except Abhyanga, baspasvedana and matrabasti during the follow-up period. Follow-up was done with all patients for a period of next 2 months. During follow-up, patients were observed



clinically for signs and symptoms every 15 days.

Therapy

All patients were treated with:

A. Abhyanga (whole body massage) with *narayana* oil followed by baspa svedana (whole body steam bath) with nirgundi patra (leaf of vitex nigundo) one time daily in the morning.

B. Daily matra basti (procto-colonic administration of medicated oil) of 40 ml *narayana* oil¹⁵ after the dinner.

C. Kegel exercise¹⁶ (special exercise) daily in the morning and evening at empty stomach.

D. Oral medicine: Balamoola (root of abutilon indicum) kvath (decoction) 40 ml twice in the morning and evening after the food. *Narayana* oil 20 ml twice with Balamoola kvath. Ashvagandha (root of the withenia somnifera) churna (powder) 3 gm

two times in the morning and evening with milk.

Diet: During main assessment period and follow-up period, patients were kept on rice, boiled mung, mung beans soup, boiled vegetables, khichadi, and wheat flour chapattis. Sour tasty foods, chilies, all other beans except mung and other food which heavy to digest were restricted.

Preparation of medicines

Āyurvedic medicines were prepared under expert supervision strictly adhering to standard operating procedures (SOP) at Sunder Āyurved Pharmacy.

Assessment of the results

- Patients' improvement was assessed based on the relief in clinical signs and symptoms of the disease. All signs and symptoms were graded before and after the treatment. (see table 1)

Table 1 Assessment criteria of signs and symptoms

Signs and symptoms	0	1	2	3
Incontinence of urine	No incontinence	Incontinence during maximum stressful condition like coughing sneezing etc	Incontinence during medium stressful condition like walking	Incontinence without any stressful condition like sleeping or rest period
Assessment of urgency (Ability to hold the urine)	3 minutes or more	2 minutes or more but less than 3 minutes	1 minutes or more but less than 2 minutes	Less than 1 minutes

- Daily activities affected due to incontinence of urine were also assessed according to the King's Health Questionnaire for incontinence of urine.¹⁷

The score of each and every question was recorded at before and after the treatment and also analyzed using the t- test.



• All outcomes were statistically analyzed using a t-test. Statistical analysis – Mean score (X), Standard deviation (S.D.), Standard error (S.E.), t - test were carried out at the level of 0.05, 0.01, 0.001 of p value. Then the results were interpreted as P

> 0.05 = Insignificant result; P < 0.01 = significant result.

• During follow-up we recorded signs and symptoms (if existent) and were performed every 15 days.

RESULTS AND DISCUSSION

In this study 15 patients of Urinary incontinence completed the course of treatment. Maximum number of the patients (60%) was more than 69 years of age, female 66.66%, Hindus 81%, Muslim 2 patients and 60% were belonged in middle class society. All the patients were married.

75% of the patients were suffered social and family problems due to incontinence.

Table 2 and 3 show the results of the study. Improvement in the symptom of incontinence of urine was 66.66% which is statistically highly significant. Urine urgency was decreased by 57.14% which is also statistically highly significant.

Table 2 Effect on signs and symptoms

Signs and symptoms	Mean value		Improvement in percent (%)	t-value	p-value
	Before treatment	After treatment			
Incontinence of urine	2.4 ± 0.63	0.8 ± 0.67	66.66 ± 0.63	9.79	< 0.001
Urine urgency	2.3 ± 0.61	1.0 ± 1.0	57.14 ± 0.62	8.66	< 0.001

Table 3 Effect on King's Health Questionnaire of urinary incontinence

King's Health Questionnaire	Mean score		Improvement in percent (%)	t-value	P-value
	Before treatment	After treatment			
General Health	58.3 ± 11.8	28.3 ± 11.6	51.43 ± 8.89	13.06	< 0.001
Incontinence impact	53.28 ± 16.31	17.8 ± 16.6	66.67 ± 8.31	16.56	< 0.001
Role limitations	52.17 ± 18.11	23.28 ± 8.18	55.38 ± 12.84	8.71	< 0.001
Physical limitations	53.28 ± 19.43	23.28 ± 14.66	56.31 ± 13.87	8.37	< 0.001
Social limitations	35.13 ± 16.44	16.63 ± 13.59	52.66 ± 8.53	8.4	< 0.001
Personal relationship	23.28 ± 8.18	7.75 ± 8.28	66.72 ± 4.15	14.49	< 0.001
Emotions	39.96 ± 13.32	18.87 ± 11.06	52.79 ± 9.54	8.55	< 0.001
Sleep / Energy	31.07 ± 10.32	9.96 ± 8.13	67.95 ± 7.38	11.08	< 0.001
Severity measures	31.09 ± 12.34	18.84 ± 10.74	39.41 ± 7.34	6.46	< 0.001

All the results related to the King's Health Questionnaire were also statistically

significant. General health and incontinence impact were decreased by 51.43% and



66.67% respectively. Limitations in daily activities like role imitations, physical limitations, social limitations, personal relationship, emotional disturbances and sleep / energy problems were also decreased by 52.17%, 53.28%, 35.13%, 23.28%, 39.96% and 31.07% respectively. A disease severity measure according to the patients' knowledge was also decreased by 31.09%.

During follow-up period no any other signs or symptoms related to the disease was found. Moreover the signs and symptoms also improved in the follow-up period. The daily activities were also improved. No any types of unwanted effect noted during the trial and follow-up period.

DISCUSSION

Such patients when treated with this therapy showed good response. The result obtained may be attributed to the disease modifying effect of trial therapy by means of their anti vata properties. Vajroli mudra would help them to remove the over activity of the detrusor muscles by giving the strength of bladder and other pelvic floor muscles. No any unwanted features noted during the assessment as well as follow-up period.

Balamoola kvatha and *narayana* taila have vata shamaka properties and so it lead to cure the vata dominance in the disease.¹⁸

Matrabasti is a form of Sneha Basti. Matrabasti nourishes the body, promotes the strength, and cures Vata-related diseases.¹⁹ Basti, through its action on Vata and Agni, promotes the formation of Dhatus. The colon is considered as main seat of Vata, and Vata-alleviating substances administered through the rectocolonic route in Matrabasti are able to have their optimum effect on the seat of Vata. Taila (sesame oil) itself is a potent Vata-alleviating substance. Its Vatashamaka action is enhanced when it is processed with Vatashamaka drugs like Patala (*Stereospermum suaveolens* DC.), Ashvagandha (*Withania somnifera* Dunal.), Agnimantha (*Clerodendrum phlomidis* Linn. f.), bala (*Abutilon indicum* Linn.), and the like, in preparing *Narayanaa* Taila. *Narayanaa* taila can be administered through any route in Vata Roga.²⁰ Balamoola and Ashvagandha are also useful for rasayana karma which helps to prevent and cure the age related diseases.²¹⁻²⁴ Kegel exercise helps to improve the stability and activity of detrusor and other pelvic floor muscles. Kegel exercise is most similar to *vajroli mudra* and *ashvini mudra* of yoga science.

CONCLUSION



On the basis of our clinical observations and the results made, it may be concluded that the Urinary incontinence found in elder people having more than 60 years of age is due to over activity of the detrusor muscle. In old age Vata is more dominant in the patients and therefore this reason is found to create this disorder.

The trial therapy is an ideal drug as a safe alternative in cases of urinary incontinence in elder people. Hence symptomatic relief will get all the types of cases of the incontinence of the urine in elderly.

CONFLICT OF INTEREST

Nil



REFERENCES

1. Stenley Devidson (2007). Devidson's Principles and Practice of Medicine. Churchill Livingstone. 20th edition, page 167.
2. Stenley Devidson (2007). Devidson's Principles and Practice of Medicine. Churchill Livingstone. 20th edition, page 167.
3. Thomas TM, Plymat KR, Blannin J, Meade TW (1980). Prevalence of urinary incontinence. *Br Med J*. 281:1243–1245
4. Herzog AR, Fultz NH (1990). Prevalence and incidence of urinary incontinence in community-dwelling populations. *J Am Geriatr Soc*. 38:273–281
5. Hampel C, Wienhold D, Benken N, Eggersmann C, Thuroff JW (1997). Definition of overactive bladder and epidemiology of urinary incontinence. *Urology*. 50:4–14
6. Thom D (1998). Variation in estimates of urinary incontinence prevalence in the community: effects of differences in definition, population characteristics, and study type. *J Am Geriatr Soc*. 46:473–480
7. Hannestad YS, Rortveit G, Sandvik H, Hunskaar S (2000). A community-based epidemiological survey of female urinary incontinence: the Norwegian EPINCONT study. *J Clin Epidemiol*. 53:1150–1157.
8. Milsom I. The prevalence of urinary incontinence (2000). *Acta Obstet Gynecol Scand*. 79:1056–1059
9. Hunskaar S, Arnold EP, Burgio K, Diokno AC, Herzog AR, Mallett VT (2000). Epidemiology and natural history of urinary incontinence. *Int Urogynecol J Pelvic Floor Dysfunct*. 11:301–319
10. Resnick NM, Yalla SW, Laurino E (1989). The pathophysiology of urinary incontinence among institutionalized elderly persons. *N Engl J Med*. 320:1–7
11. Aggazzotti G, Pesce F, Grassi D, Fantuzzi G, Righi E, De Vita D, et al (2000). Prevalence of urinary incontinence among institutionalized patients: a cross-sectional epidemiologic study in a mid-sized city in northern Italy. *Urology*. 56:245–249
12. Ouslander JG, Palmer MH, Rovner BW, German PS (1993). Urinary incontinence in nursing homes: incidence, remission and associated factors. *J Am Geriatr Soc*. 41:1083–1087
13. Nygaard IE, Lemke JH (1996). Urinary incontinence in rural older women: Prevalence, incidence and remission. *J Am Geriatr Soc*. 44:1049–1054
14. P. Abrams et al (2010). Fourth International Consultation on Incontinence Recommendations of the International Scientific Committee: Evaluation and



Treatment of Urinary Incontinence, Pelvic Organ Prolapse, and Fecal Incontinence. *Neurourology and Urodynamics*. 29:213–240. available on web <http://onlinelibrary.wiley.com/doi/10.1002/nu.20870/pdf> downloaded on 23/11/12; 3:25 PM (IST)

15. Sharangadharacharya (2002). *Sharangadhara Samhita*, Madhyama Khanda, Ghrita-Taila Kalpana Adhyaya, 9/101-110. Tripathi B, editor. Varanasi: Chaukhambha Sanskrit Samsthan. P 233.

16. MedlinePlus Medical Encyclopedia: Kegel exercises. Nlm.nih.gov. 29-08-2011. Retrieved 02-09-2011. Available at [http://www.nlm.nih.gov/medlineplus/ency/atientinstructions/000141.htm](http://www.nlm.nih.gov/medlineplus/ency/patientinstructions/000141.htm)

17. <http://guidance.nic.org.uk/CG17/KingsHealthQuestionnaire> downloaded on 25/11/2013; 2:30 PM IST.

18. Dhanvantari Nighantu (1996), *Guduchyadi Varga/271*, edited by Dr Jarkhande Oza. 2nd edition, Varanasi: Chaukhambha Surbharti Prakashana.

19. Agnivesha, Charaka, Dridhabala (2004). *Charaka Samhita – Vol. 2, Siddhi Sthana Snehavyapadasiddhi Adhyaya*, 4/53. Edited by Shastri K. Varanasi: Chaukhambha Sanskrit Samsthan. p. 1013.

20. Sharangadhara (2002). *Sharangadhara Samhita*, Madhyama Khanda, Ghrita Taila

Kalpana Adhaya, 9/101-110. Tripathi B, editor. Varanasi: Chaukhambha Sanskrit Samsthan. p. 233.

21. Sharma PC, Yelne MB, Dennis TJ, Joshi A (2001). *Database on medicinal plants used in Ayurveda-Vol. 3*. New Delhi: Central council of Research in Ayurveda and Siddha, Dept. of AYUSH, Ministry of H and FW, Govt. of India. p. 88.

22. Pandit Bhavamishra (1998), *Bhavaprakash Nighantu*, Purvakhanda, *Guduchyadi Varga/135*, Commentated by Vishvanath Dvivedi. 9th edition, Varanasi: Motilal Banarasidad Prakashan.

23. Dhanvantari Nighantu (1996), *Guduchyadi Varga/271*, edited by Dr Jarkhande Oza. 2nd edition, Varanasi: Chaukhambha Surbharti Prakashana.

24. Sushruta (1980), *Sushruta Samhita*, Chikitsa sthana, *Adhyaya 27/10*. Edited by Vaidya Jadavaji Trikamji Acharya and Narayanaram Acharya, 4th edition, Varanasi: Chaukhambha Orientalia.