



Research Article

EFFICACY OF *USHNODAKAPANA* IN THE MANAGEMENT OF *VIBHANDHA* W.S R TO *USHA-KAAL* (SUNRISE) AND *NISHA-KAAL* (SUNSET)

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ABSTRACT

Vibandha is the most common digestive complaint and cause for lot of lifestyle disorders. Almost 70%-80% people struggle with constipation and the market of laxative is growing healthy each year. So, it appears that *vibandha* is the issue that most of us must deal with, one time or other. This study was aimed to find an affordable and quick relief from *Vibandha* using *Ushnodakapana* as well as lifestyle modification. 32 patients who diagnosed as suffering from *Vibandha* was divided into two groups as Group -A (study) and Group -B (control). Group A was administered 2 glasses of *Ushnodaka* given in morning time and Group B was administered 2 glasses of *Ushnodaka* given in night-time. There was marked and moderate improvement observed in morning group when compared to night group patients. Relief in main complaints like consistency of stools is 45.83% in morning group when compared to 45.83% in night group which is highly significant at (p>0.001), straining is 60% in night group when compared to 58% in morning group which is highly significant at (p>0.001), unsatisfied evacuation is 71.11% in morning group as compared to 61.22% in night group which is highly significant at (p>0.001), daily evacuation is 83.33% in morning group as compared to 80% in night group which is highly significant at (p>0.001). *Ushnodaka* due to the *Vatanulomana*, *Deepana* property relieves *Vata* and clears the *Aama*. Therefore, *Ushnodakapana* can be prescribed as a better solution for *Vibandha*.

INTRODUCTION

Water is origin of life, from where came whole unicellular to multicellular organism, whole animal, and plant kingdoms. The human body and globe share the same proportion of water. Water is considered as life for human being, so it can't be contraindicated completely in any bodily condition. This phrase was written long back in our *Samhita's* and *Purana's*, which is getting stabilized now by modern scientists through the various new researches. Water is an eternal natural resource which should be utilized for mankind after knowing its remedial property. There is a list of indications enumerated in our literatures for cold water, hot water, and cooled hot water.

Apana is a subtype of *Vata* which controls the functions in *Pakvashaya* region, any vitiation in it due to irregular and bad habits of *Ahara*, *Vihara* along with the suppression of natural urges, *Vyadhis* like *Vibandha* are produced, which affects physical as well as psychological factors also. All most each person suffers from it many times in the life, due to the stress, travelling, untimely food habits, decrease in water and fiber rich foods. *Vibandha* leads one's routine to misery causing loss of interest, headache, discomfort in abdomen and loss of appetite which further creates anger and depression. In severe state it makes person bedridden. It's the root cause of several other diseases.

Treatment and getting cure for disease depends on the time taken for *Samprapti Vighatana* effectively. The science of life, Ayurveda mentions various methods of *Chikitsa* to obtain normalcy of *Doshas*, and thus cure from illness. To obtain cure and to prevent reoccurrence, the best method is to follow *Pathya* during and after treatment. But in mild diseases only use of *Pathya* and *Nidanaparivarjana* is going to

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give complete cure for lifetime. Herein there is requirement of *Pathya* which shows effect on *Pureesh avahasrotas*, is easily palatable and does the *Samprapti vighatana* efficiently.

Ushnodaka is having the property of *Vatanulomana*, *Deepana* and *Aamagna*.^[5] Due to which it relieves the *Apanavaigunya* and the *Sara*, *Sngdhaguna* of *Jala* softens the *Mala* and pushes it out of body hence clearing the obstruction of *Srotas*.^[7] Its easy availability and simple processing will make it more comfortable to use it in day-to-day life. On basis of above concept, the research work entitled "Role of *Ushnodakapana* in *Vibandha*" is planned. 64 patients fulfilling the inclusion criteria on basis of Rome 2 Criteria of Constipation has been randomly selected, out of which 4 were dropout, so study was completed in 60 patients, by dividing them into 2 groups. Group-*Aushnodaka* was administered in morning whereas in Group-B, *Ushnodaka* was administered in night. After completing the study, the obtained statistical data was tested with different statistical methods, which show statistically significant results in both the groups, more significance in morning group than night time. Follow up shows the reoccurrence in both groups, indicating the practice of *Ushnodaka* daily as food for benefits.

MATERIALS AND METHODS

Methodology

32 patients of *Vibandha* fulfilling the inclusion criteria will be randomly selected from the OPD and IPD of the institute. This is an observational clinical study planned for 64 patients with a pre-test and post-test design in two groups, each group comprising of 16 patients.

Group A: The patients of this group will be given 2 glasses (180ml each) of *Ushnodaka* just after awakening in the morning, along with *Arogyavardhini Vati* and *Abhayarishtha* once daily for 7 days.

Group B: The patients of this group will be given 2 glasses (180ml each) of *Ushnodaka* at bedtime in the night, along with *Arogyavardhini Vati* and *Abhayarishtha* once daily for 7 days once daily for 7 days.

Preparation of *Ushnodaka*

4 glasses of hot water are taken. It's boiled and reduced to 2 glasses. When it becomes tolerable to drink then its two glasses will be administered at a time.

Diagnostic Criteria

The diagnosis was established based on Rome II Criteria for Constipation.

Two or more of the following for at least 12 weeks:

1. Straining during bowel
2. Lumpy or hard stools

3. Sensation of incomplete evacuation
4. Manual manoeuvres to facilitate of bowel movements.
5. Less than three bowel movements per week.

Inclusion Criteria

- Patients of both the sexes in the age group of 18 – 60 yrs.
- Straining during bowels.
- Passing of hard, lumpy stools
- Sensation of incomplete evacuation
- Less than three bowel movements per week

Exclusion Criteria

- Patients of both the sexes in the age group of below 18yrs and above 60 yrs.
- Constipation associated with other systemic illness.
- Passing of hard, lumpy stool once in more than three days.

Criteria for the Total Effect of the Therapy

Based on total effect of therapy, results were assessed by determining the percentage of score reduction.

Assessment	Score
Excellent Improvement	>75%
Marked Improvement	50-75%
Mild Improvement	25-50%
No Improvement	<25%

Statistical Analysis

All the observation made on various parameters of both the groups will be noted and the data will be analyzed by 't' – test as suggested by the statistician. Paired 't' – test is used to calculate data within the group & unpaired 't' – test to calculate data between two groups and the result of statistical analysis is interpreted in terms of mean (\bar{x}) S.D., S.E and P value.

The obtained results were interpreted in the statistically terms as

- **Significant:** $P < 0.005$ / $P < 0.01$
- **Highly Significant:** $P < 0.001$

Assessment Criteria

A. Daily Evacuation of Stools	
Once/day	0
Once/2 days	1
Once/3 days	2
B. Consistency of Stools	
Loose stools	0
Well-formed	1

Hard	2
C. Nature of Evacuation	
Easy evacuation	0
With mild stress	1
Require straining	2
D. Feeling After Defecation	

Satisfied	0
Not fully satisfied	1
Unsatisfied	2

Follow Up Study

After completion of the treatment the patients will be followed at regular intervals of every 15 days for a period of 1 month.

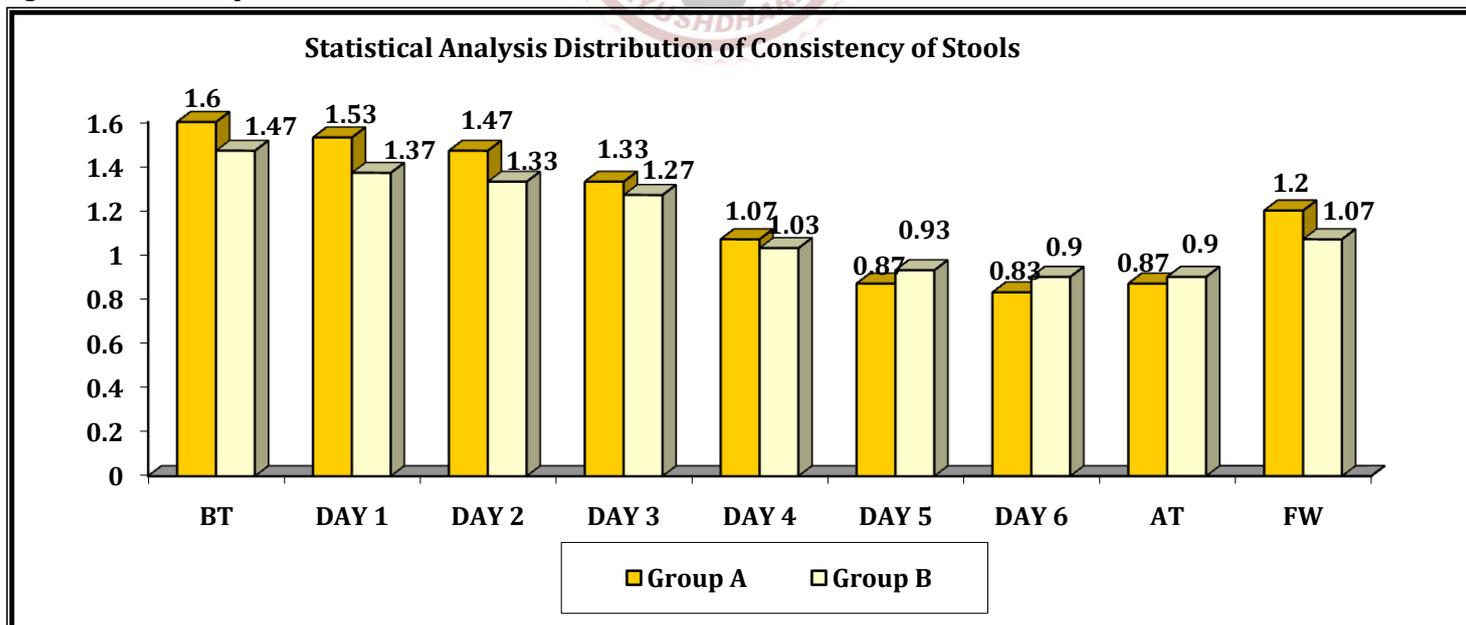
RESULTS

Consistency of Stools - Statistical Analysis (Day Wise)

Table 1: Statistical Analysis of Consistency of Stools day wise

	Day - 1		Day - 2		Day - 3		Day - 4		Day - 5		Day - 6	
	A	B	A	B	A	B	A	B	A	B	A	B
Mean BT	1.6	1.47	1.6	1.47	1.6	1.47	1.6	1.47	1.6	1.47	1.6	1.47
Mean AT	1.53	1.37	1.47	1.33	1.33	1.27	1.07	1.03	0.87	0.93	0.83	0.9
Mean BT - AT	0.07	0.1	0.13	0.13	0.27	0.2	0.53	0.43	0.73	0.53	0.77	0.57
Mean %imp	4.17	6.82	8.33	9.09	16.67	13.64	33.33	29.55	45.83	36.36	45.83	38.64
S.D	0.51	0.56	0.51	0.61	0.48	0.58	0.37	0.56	0.35	0.45	0.38	0.31
S.E	0.09	0.10	0.09	0.11	0.09	0.11	0.07	0.10	0.06	0.08	0.07	0.06
"t" value	0.72	0.99	1.44	1.20	3.05	1.88	8.00	4.27	11.62	6.49	11.08	10.17
p value	>0.05	>0.05	>0.05	>0.05	<0.01	>0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

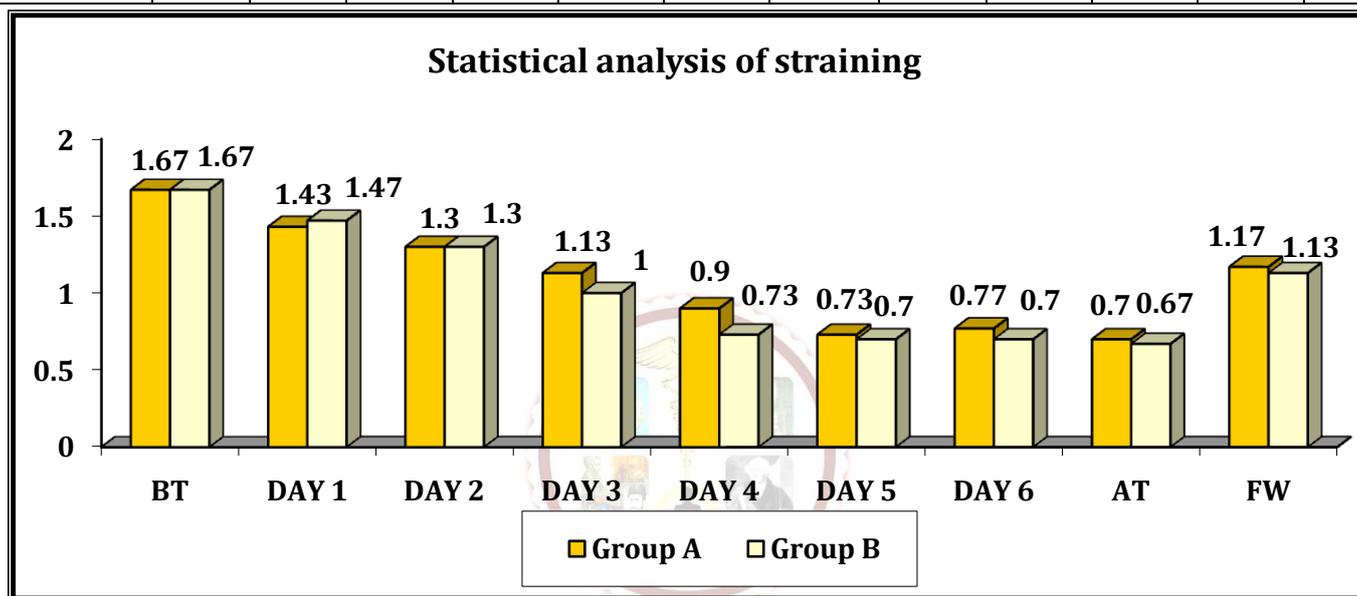
In Group A, 11 patients have shown moderate improvement and in Group B, 9 patients have shown moderate improvement. In Group A, 10 patients have shown no improvement and in Group B, 13 patients have shown no improvement. In Group A, 3 patients have shown good improvement and in Group B, no patients have shown good improvement. The results are statistically significant in Group A at the level of <0.001. The results are statistically significant in Group B at the level of <0.001.



Straining - Statistical analysis (Day wise)

Table 2: Statistical analysis of straining of stools day wise

	Day - 1		Day - 2		Day - 3		Day - 4		Day - 5		Day - 6	
	A	B	A	A	A	B	B	B	A	B	A	B
BT	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67
AT	1.43	1.47	1.3	0.9	0.73	0.7	0.73	1.3	1.13	1	0.77	0.7
Mean BT-AT	0.23	0.2	0.37	0.77	0.93	0.97	0.93	0.37	0.53	0.67	0.9	0.97
Mean % imp	14	12	22	46	56	58	56	22	32	40	58	58
S.D	0.50	0.51	0.47	0.66	0.58	0.53	0.45	0.53	0.57	0.53	0.68	0.60
S.E	0.09	0.09	0.09	0.12	0.11	0.10	0.08	0.10	0.10	0.10	0.12	0.11
“t”value	2.54	2.16	4.31	6.35	8.76	9.90	11.37	3.75	5.11	6.95	7.26	8.88
p value	<0.02	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

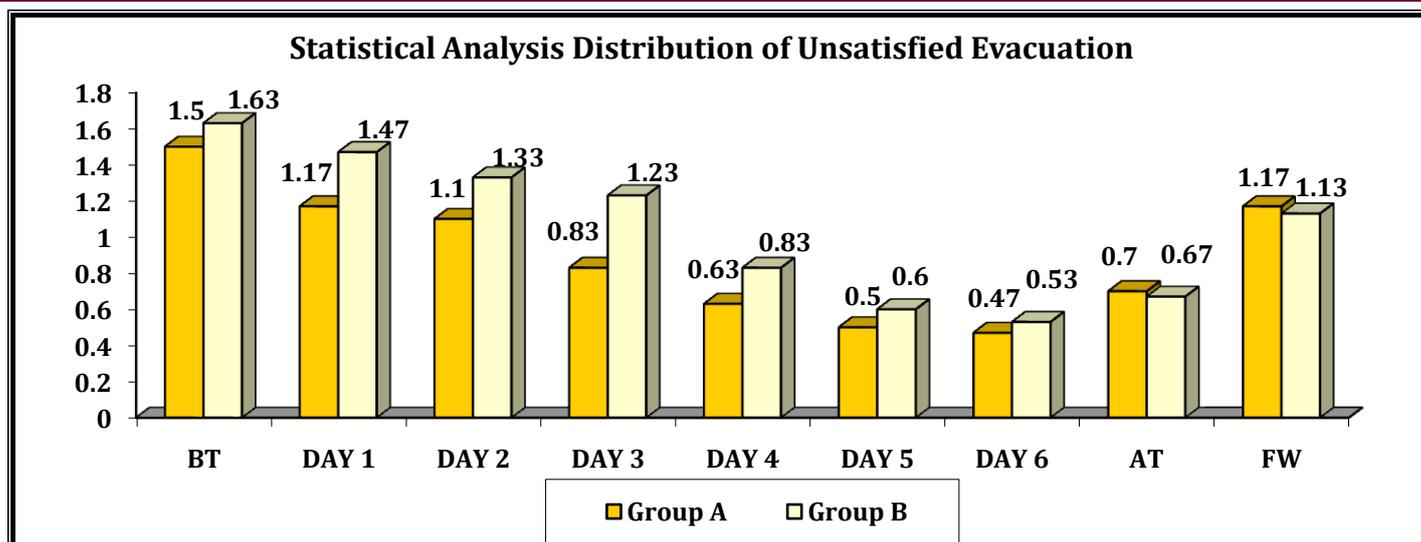


In Group A, 15 patients have shown moderate improvement and in Group B, 11 patients have shown moderate improvement. In Group A, 7 patients have shown no improvement and in Group B, 10 patients have shown no improvement. In Group A, 8 patients have shown good improvement and in Group B, 9 patients have shown good improvement. The results are statistically significant in Group A at the level of $p < 0.001$. The results are statistically significant in Group B at the level of $p < 0.001$.

Unsatisfied- Statistical analysis (A.T & F.W)

Table 3: Statistical Analysis of unsatisfaction of Stools after Treatment and Follow up

	AT			FW	
	G.A	G.B		G.A	G.B
BT	1.5	1.63	BT	1.5	1.63
AT	0.43	0.63	FW	0.9	1.13
Mean BT - AT	1.07	1	Mean BT - AT	0.6	0.53
Mean % imp	71.11	61.22	Mean % imp	40	30.61
S.D	0.74	0.74	S.D	0.67	0.73
	5.48	5.48		5.48	5.48
S.E	0.14	0.14	S.E	0.12	0.13
“t” value	7.90	7.37	“t” value	4.87	3.75
p value	< 0.001	< 0.001	p value	< 0.001	< 0.001



Evacuation - Statistical analysis (Day wise)

Table 4: Statistical Analysis of Evacuation of Stools day wise

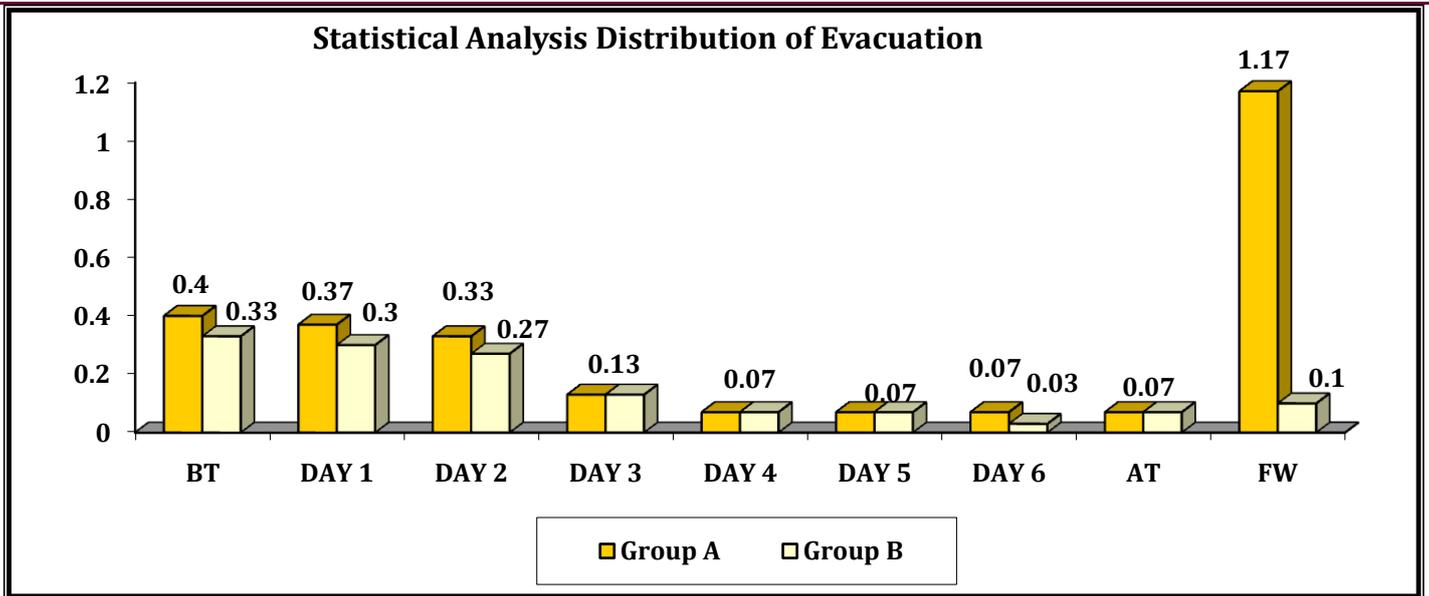
	Day - 1		Day - 2		Day - 3	
	A	B	A	B	A	B
BT	0.4	0.33	0.4	0.33	0.4	0.33
AT	0.37	0.3	0.33	0.27	0.13	0.13
Mean BT - AT	0.03	0.03	0.07	0.07	0.27	0.2
Mean %imp	8.33	10	16.67	20	66.67	60
S.D	0.61	0.47	0.61	0.45	0.35	0.35
S.E	0.11	0.09	0.11	0.08	0.06	0.06
“t value	0.30	0.39	0.60	0.81	4.22	3.17
p value	> 0.05	> 0.05	> 0.05	> 0.05	< 0.001	< 0.01

In Group A, 10 patients have shown moderate improvement and in Group B, 9 patients have shown moderate improvement. In Group A, 12 patients have shown no improvement and in Group B, 21 patients have shown no improvement. No patients have found good improvement. The results are statistically significant in Group A at the level of $p < 0.001$. The results are statistically significant in Group B at the level of $p < 0.001$

Evacuation - Statistical analysis (A.T & F.W)

Table 5: Statistical analysis of evacuation of stools after treatment and follow up

	AT			FW	
	G.A	G.B		G.A	G.B
BT	0.4	0.33	BT	0.4	0.33
AT	0.07	0.07	FW	0.17	0.1
Mean BT - AT	0.33	0.27	Mean BT - AT	0.23	0.23
Mean %imp	83.33	80	Mean %imp	58.33	70
S.D	0.48	0.45	S.D	0.50	0.50
S.E	0.09	0.08	S.E	0.09	0.09
“t”value	3.81	3.25	“t”value	2.54	2.54
p value	< 0.001	< 0.01	p value	< 0.02	< 0.02



Overall Improvement - Patient Wise (A.T & F.W)

Table 6: Patient wise overall improvement

	A.T		F.W	
	A	B	A	B
More than 75% (Marked)	10	9	2	2
50-75% (Moderate)	12	11	6	5
25-50% (Mild)	4	8	10	11
Less than 25% (unchanged)	4	2	12	12

Over all after Treatment Results

Overall improvement shows that in Group A, 10 patients showed marked improvement while in Group B, 9 patients showed marked improvement. In Group A, 12 patients showed moderate improvement while in Group B, 11 patients showed moderate improved. In Group A, 4 patients showed mild improvement while in Group B, 8 patients showed mild improvement. In Group A, 4 patients showed no improvement while in Group B, 2 patients showed no improvement. Both the group has palliative role in *Vibandha*. Here in group A that is water taken in early morning time is more beneficial when compared to evening.

Overall after Follow up Results

Overall improvement shows that in Group A, 2 patients showed marked improvement while in Group B, 2 patients showed marked improvement. In Group A, 6 patients showed moderate improvement while in Group B, 5 patients showed moderate improved. In Group A, 10 patients showed mild improvement while in Group B, 11 patients showed mild improvement. In Group A, 12 patients showed no improvement while in Group B, 12 patients showed no improvement. This shows the re-occurrence of *Vibandha* after the treatment.

DISCUSSION

Ushnodaka practice has given effective results in both the groups. There was marked and moderate improvement observed in morning group when compared to night group patients. Relief in main complaints like consistency of stools is 45.83% in morning group when compared to 45.83% in night group which is highly significant at ($p>0.001$), straining is 60% in night group when compared to 58% in morning group which is highly significant at ($p>0.001$), unsatisfied evacuation is 71.11% in morning group as compared to 61.22% in night group which is highly significant at ($p>0.001$), daily evacuation is 83.33% in morning group as compared to 80% in night group which is highly significant at ($p>0.001$). During follow up there is reoccurrence observed in both the groups.

During morning time morning time, the *Jeerna aahara lakshana* is found in patients and due to empty stomach as the previous night food got digested and will be stored in rectum. The hot water stimulates the muscular contractions and peristaltic movements and also the large quantity of taken water puts a force on stools to create an urge. Due to water the stools were softened, and the channel gets cleared without strain. In night group the peristaltic and muscular movements are normal as the patient is awakened and working so

the hot water doesn't put much stimulation and force, hence there the effect is not much observed in this group. But due to large quantity of water the stools get softened and during evacuation straining are decreased, as seen in statistical results too.

CONCLUSION

1. The symptoms were decrease in both the groups, suggesting that efficacy of *Ushnodakapana* in getting relief from *Vibandha*
2. The symptoms were reduced markedly in morning group patients when compared to night group patients.
3. The results are got increased in every follow up, indicating the need for continuous practice.

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