Clinical study to evaluate the efficiacy of Mutravirechaniya Mahakashaya along with Madhuyashti churna (Glycyrrhiza glabra linn) in the management of Pittaja Mutrakrucchra (UTI).

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Abstract-Kidney disease is basically general term for all the heterogeneous disorders, that affect not only its kidney structure, but also its function along with variable clinical presentation which may be related either to their cause, severity or the rate of progression. Like other developing countries, kidney disease is Silent epidemic in india . Among all kidney diseases, Urinary Tract Infection (UTI) is very common condition seen in middle aged persons and up to 50% of female gender, suffer from Urinary tract infection but in males Urinary Tract Infection are not so common. As per Ayurveda, Heart, Brain, and Vrikka (kidney) are the three Sadyo Pranahara Marma and are Agneya in nature. Due to Agneya and Sadyo Pranahara Marma by nature, any physical trauma/pathological diseases to any of these Marmas can result in its death. The symptoms of Urinary tract infection are quite similar to Mutrakruccha as described in Ayurveda and the cardinal sign of Mutrakruccha (UTIs) according to Ayurveda is "Dukhena Mootra Pravriti" that means discomfort during micturition. UTI may be definite as a condition in which bacteria enter, persist and multiply within the urinary tract. Mutrakruccha is also found as a Lakshana in other diseases like Ashmari, Mutraghata, Mutrajavriddhri, Arsha and Gulma etc. Management of infections through Avurveda helps in achieving positive result with minimum medication without irrational combination of allopathic medicines and other therapies. Hence in this Research Paper, in order to cure the patients of UTI patients, in their earlier stages, Mutravirechaniva Mahakashaya along with Madhuyashti churna (Glycyrrhiza glabra linn) was found to be useful in Pittaja Mutrakruchra.

Index Terms—Mutrakruccha (UTIs), Mutravirechaniya Mahakashaya, Ayurveda, Vrikka, Agneya, Sadyo Pranahara Marma.

I. INTRODUCTION

Kidney disease is one of the most important problem worldwide and can be defined as a state of¹Progressive loss of kidney function with an estimated glomerular filtration rate (eGFR) less than 60 ml/min per 1.73 square meters, followed by progressive loss of kidney function, persisting for 3 months or more.

Among all the kidney disease, Urinary tract infection is a common contamination among females and males but due to physiology of females the incidence is quite high in female gender than that of male, at a ratio² of 8:1. This is due to the fact that female gender will definitely encounter during the span of their life time and the prevalence is much higher among women during pregnancy³. As the name UTI indicates, the infected parts thus involve the urinary tract comprising of bothethe upper and lower urinary tract and the symptoms of Urinary tract infection are similar to that of Mutrakruccha as described in Ayurveda⁴. Mutrakruccha disease is affecting Basti and Mutra Marga (urinary passage). Mutraghata, Prameha and Ashmari and Mutrakruccha are included under the diseases of Mutravaha Srotas (channels carrying the urine). In case the injuries of Mutravaha Srotas, the treatment is explained as a Mutrakricha Chikitsa⁵. All the Patients who have complaints of increased frequency, urgency, hesitancy, burning micturition, painful micturition and red-yellow orange urine in Mutrakruccha.⁶ Even though modern medical system has many modern drugs but there are so many cases where patients suffer due to lack of desired results, in suppressing the symptoms due to drug resistance of microorganisms and side effects of the drugs in metabolic systems, immune system forces us to think for alternative modalities of management. Management of Mutrakruccha through Ayurveda medicine wasthus selected and success was achieved in treating Mutrakruccha (urinary tract infection).E. coli as we all of us know is main culprit for approximately 85% of urinary tract infections⁷ .As per Acharya Kashyapa, Mutrakruccha is Pitta Pradhana Tridoshaja Vyadhi⁸ while Acharya Hareeta calls it as a Pitta Pradhana Vyadhi9 .Thus Pitta Prakopa leads to Mutrakruccha, while on the other hand Acharya Charaka has recommended Vata Sthananupurvi Chikitsa in the treatment of Mutrakricha¹⁰. So as per Doshas we can classify Nidanas of Vata Prakopaka Nidana as Vyavaya, Vyayama, Vegadharana, Ruksha Madhya, Shakrita, Vyadhikshamatva, Abhighata, Pitta Prakopaka Nidana & Pitta Prakopaka Dravya (Krodha, Shoka, Sarshapa etc.), Katu, Amla, Lavana Rasa Ati Sevana, Anupa Matsya Mamsa, Madya, Ruksha Ahara, Tikshana Aushadha, Katiskandha Dharana and Kapha Prakopaka Nidana i.e. Anupa Mamsa, Adhayasana, Ajirna. Mutrakrucchra also happens due to Nidanarthakara Roga i.e. Ajirna¹¹ and due to Abhighataja Nidana i.e. Indrivapratighata, Rakta Pravritti in Mutrendriya and Uttana Ratibhanga¹².

All the above Nidana Sevana thus leads to vitiation of Tridoshas along with the state of Agnimandhya ,which in turn invariably produces Ama, which when mixed with the Doshas, Leads to the formation of Sama Doshas, which in turn produces symptoms like Peeta Mutra (yellowish urine), Sadaha Mutra Pravritti (burning micturition), Basti and Mutrendriya Gurutwa (inflammation of bladder), Shweta, Snigdha and Picchila Mutra (turbid urine with the presence of leucocytes). In the perspective of Mutrakrucchra, only Acharya Charaka has described the pathogenesis, When the Doshas have been vitiated by the specific etiological factors, then these three Doshas either individually or jointly get aggravated in the Basti or afflict the urinary passage, giving rise to Mutrakruccha. Acharya Charaka and Sushruta has described eight and Acharya Vagbhatta while on the other hand described four types of Mutrakruccha.

II. AIMS AND OBJECTIVES: -

1. To evaluate the efficiacy of Mutravirechaniya *Mahakashaya* in the management of Pittaja *Mutrakruccha* (UTI).

2. To evaluate the efficiacy of Mutravirechaniya *Maha Kashaya* along with *Madhuyashti churna* (*Glycyrrhiza glabra linn*) in the management of Pittaja *Mutrakruccha* (UTI).

A. Inclusion criteria: -

1. Pittaja Mutrakruccha (UTI), diagnosed patients (as per criteria).

2. Clinically stable patients of any stage but between the age group 15- 70 years.

B. Exclusion criteria: -

- 1. Any stage requiring surgical intervention
- 2. Age below 15 years and above 70 years.
- 3. Uncontrolled Diabetes / Hypertension/Any comorbidity
- 4. Malignancy of any type.
- 5. Pregnancy and lactating mother.

III. MATERIAL AND METHODS: -

The Present Clinical study was done in the Department of *Kayachikitsa* of Dac Jalandhar.

A. Investigations for assessment of renal failure (Objective Criteria)

- 1. CBC
- 2. RBS
- 3. Urine Routine/Microscopic Randomly freshly voided sample is usually adequate for most tests (with focus on Pus cells, Epithelial cells and presence of bacteria etc).

Table showing Subjective criteria: -Scoring

Symptom	Grading				
Pain during micturition	0 – Absent (no pain)				
	1- Mild (Referred pain)				
	2 – Moderate (Referred painat private genital part)				
	3 - Severe (continuous pain at genital part)				
Burning micturition	0 – Absent				
	1- Mild (Burning micturition sometimes)				
	2-Moderate (Burning micturition upto 1 hour)				
	3- Severe (Burning micturition beyond 1 hr)				
Frequency of micturition at night	0 – Absent (
	1- Mild (2-3 times micturition at night)				
	2 – Moderate (3-5 times micturition at night)				
	3 - Severe (greater than 5 times micturition at night				
B. Frequency of Assessment	Follow up: -After every 20 days.				

B. Frequency of Assessment

1st-follow up after 20 days

2ndvisit after 40 days of 1st visit, Total duration of the trial - 40 Days

Drug used

1. Mutravirechaniya Mahakashaya (Charak Samhita Sutra Sthana4/15) – 50 ml, twice a day along with luke warm water, before food for 40 days.

2. Madhuyashti churna (Glycyrrhiza glabra linn): -

1 gm twice a day along with luke warm water.

Group- Total Two groups

Group 1- Mutravirechaniya Mahakashaya along with Madhuyashti churna was used for the trial.

Group 2- Only Mutravirechaniya Mahakashaya is used

Total Number of patients- 50, Out of which four left and total number of patients who completed study are 46 in number.

Duration: - 40 days.

Anupana: -Luke warm water

Kusha, Kasha, Gundra and Itkatmoola 4. Madhuyashti Churna (Glycyrrhizaglabralinn) Results-Spss tool was used in order to know about the results. The results were prepared under two sections. The first Part expands the general observation like Age, gender etc, while the second part focuses on results of therapies evaluated om the basis of previously given data. Friedman test was used to compare the group AT, BT1 and BT2.In case of objective parameters like Hb,TLC, ESR etc was carried out at P less than 0.05, P less than 0.01 and P less than 0.00 levels. The obtained results were interpreted as insignificant if P>0.05, significant <0.05 and highly significant if P

MutraVirechaniya Mahakshaya are the best diuretics and include following drugs like Vrikshadani,

Gokshura, Vasuka, Vashera, Pashanabheda, Darbha,

3. Mutravirechana Mahakashaya

is less than 0.01 and 0.001.

Table 1: - Showing effect of Drugs on Subjective Parameter of patients of Pittaja Mutrakruccha (UTI) are as

SUBJECTIVE	Group	Ν	Mean	Standard deviation	Sig. (Marchly's test of sphericity)
PARAMETERS					factor 1
Pain during micturition	BT 1	23	1.22	0.518	0.008
	AT1 1	23	0.96	0.209	
	AT2 1	23	0.13	0.344	
Burning micturition	BT 1	23	1.70	0.703	0.015
	AT1 1	23	1.09	0.515	
	AT2 1	23	0.35	0.487	
Frequency of	BT 2 2	23	1.35	0.647	0.015
micturition at night	AT1 2	23	1.22	0.458	
	AT2 2	23	0.87	0.487	
	AT1 2	23	0.91	0.596	

AT2 2	23	0.61	0.499		

From this table, it is very much clear that p value is significant at 0.05, indicating effect of group 1 drug effectiveness is more than that of Group 2, Where only Mutravirechaniya Mahakashaya is used in the management of Pittaja Mutrakruccha (UTI).

Table 2- Showing General observations in 46 patients of Pittaja Mutrakruccha (UTI)-

	Ν	Min.	Max.	Mean	Std. Deviation	Skewness
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
Age	46	1.00	4.00	3.0000	.84327	697
Gender	46	.00	1.00	.6957	.46522	879
Religion	46	.00	1.00	.5217	.50505	090
Marital status	46	.00	1.00	.0652	.24964	3.642
Education	46	.00	3.00	2.0870	.81175	-1.206
Occupation	46	.00	4.00	1.6522	.84898	388
Socioeconomic Status	46	.00	2.00	1.8043	.49976	-2.617
Habitat	46	.00	1.00	.3043	.46522	.879
Dietary Habits	46	.00	1.00	.6522	.48154	661
RasPrandhanya	46	.00	2.00	1.8478	.46986	-3.203
Agni	46	2.00	3.00	2.2826	.45524	.998
Kostha	46	.00	1.00	.2391	.43127	1.265
Nature of work	46	.00	2.00	.3913	.77397	1.583
Addiction	46	.00	3.00	.6957	1.09280	1.075
Sleep Pattern	46	.00	1.00	.8478	.36316	-2.003
DehaPrakriti	46	.00	2.00	1.1739	.76896	313
Mansa Prakriti	46	.00	1.00	.6957	.46522	879
Sara	46	.00	2.00	1.1739	.48554	.451
Samahanan	46	.00	2.00	1.0870	.41237	.654
Satmya	46	.00	2.00	1.0435	.36249	.597
Satva	46	.00	1.00	.4783	.50505	.090
Pramana	46	.00	1.00	.8043	.40109	-1.587
Abhyaharna Shakti	46	1.00	2.00	1.8696	.34050	-2.269
Jarna Shakti	46	.00	2.00	1.4783	.65791	896
Vyayama Shakti	46	.00	2.00	1.2174	.59304	088
Anupashaya	46	.00	1.00	.5217	.50505	090
Day sleep	46	.00	2.00	.7391	.64755	.307
AharaDravya	46	.00	4.00	2.0000	1.15470	272
ViharJanya Nidana	46	.00	3.00	.8261	.94996	.527
Chronicity	46	.00	2.00	.6087	.57651	.281
Past Illness	46	.00	4.00	1.3913	1.43725	.674
Disease Onset	46	.00	1.00	.7174	.45524	998
Burning MicturationOnset	46	.00	1.00	.7826	.41703	-1.417
Valid N (listwise)	46		1			

Table showing objective Parameters of the 46 patients of Pittaja Mutrakruccha (UTI) selected from the trial, revealed that maximum patients selected were in 45 to 55 years of age group followed by 13 patients belonging to 55 to 70 years of age group and 7 belong to 35 to 45 years, whereas rest 3 belonged to 25 to 35 years. Similarly maximum 32 were males whereas only 14 were females. 24 were Hindu and 22 belonged to sikh community. 43 patients selected were married whereas only 3 were unmarried. Maximum patients 28 had completed secondary education 13 were graduates, 4 were uneducated and 1 was primary passed. 29 patients belong to service class whereas 8 belonged to labour class and 6 were housewife, 2 are businessman and 1 was retired person. As far as socioeconomic Status is concerned, 39 belong to middle class, 5 were rich and 2 are poor. 32 patients were from urban habitat and 14 were from rural habitat. 30 patients were having mixed diet pattern whereas only 16 were vegetarian. 41 patients were having Lavana Rasa Prandhanya whereas 3 were Amla and 2 were having Madhur Rasa Prandhanya. 33 patients were having Mandya Agni, 13 were of Sama Agni. Similarly, 35 were of Mridhu Kostha and 11 were of Madhyama Kostha. 36 patients were having sedentary lifestyle and 8 were having moderate nature of work and the rest 2 patients were having heavy nature of work. 32 patients were having Tea/Coffee Addiction 10 were on frequent use of Painkillers and 4 patients were not having any addiction. When we observe the sleep pattern, we will find that 39 were having disturbed sleep and only 7 were having sound sleep pattern.18 patients were having both Pitta Kapha and KaphaVatta Prakriti whereas 10 were having Vatta Pitta Prakriti. In the same way 32 patients belong to Tamsika Mansa Prakriti and 14 to Rajasika Mansa

Prakriti. 34 were of Madhyam Sara and rest 10 and 2 belong to Avara and Pravara Sara. 38 belonged to Madhyam Samhanan and 6 and 2 belong to Avara and Pravara Sara. 40 were of Madhyam Satyma and rest 4 and 2 belonged to Avara and Pravara Satyma. 24 belonged to Pravara salvation whereas 22 belonged to Madhyam salvation. 37 were of Madhyam Pramana whereas rest 9 were of Pravara Pramana. 40 Patients belonged to Avara Abhyaharna Shakti whereas 6 belonged to Madhyam Abhyaharan Shakti. 26 belonged to Avara Jarna Shakti whereas rest 16 and 4 belong to Madhyam and Pravara Jarna Shakti. 28 patients were having Madhyam Vyayama Shakti whereas 14 and 4 were having Avaraand Pravara Vyayama Shakti.24 patients were having Anupashaya of hot weather whereas 22 were taking spicy/salty food.24 were having less than one-hour sleep and 17 were having no day sleep whereas 5 patients were having more than one-hour sleep. 15 patients were having history of ATI Ambhupana, 13 with Lavan evum Vidahi Ahara and 9, 6 and 3 with Ruksha Ahara, Rakta Prakopakahara and Anoop Deshiya Mamsa Ahara history. 24 patients were having Mutra Vegdharan, 14 were having Yanayan and 7 were having Mala Vegdharan and 1 was with Divaswapana history. As far as chronicity is considered 24 patients were having history of 5 to 10 years chronicity, 20 were having 3 to 5 years history of chronicity and rest 2 were having only 10 to 15 years of chronicity. 17 patients were having past history of Frequent UTI, 12 with burning Micturation, 6 with urine retention and periodically increase in serum uric acid level and 5 with renal calculi. 33 patients belonged to chronic disease Onset whereas 13 belonged to acute disease Onset. Last but not least Onset of UTI was insidious in 36 patients whereas it was acute in 10 patients.

Variable	S	Group	Ν	Mean	Standard	Sig. (Mauchly's test of sphericity) of diff
					deviation	b/w 2 gps
Hb gm%	BT	1	23	10.696	0.4467	0.000
	AT_1	1	23	10.696	0.4467	
	AT ₂	1	23	10.713	0.4506	
PLATELET	BT	1	23	1.6487	0.14729	0.000
COUNT						
	AT_1	1	23	1.6478	0.14814	
	AT ₂	1	23	1.6470	0.15884	
TLC	BT	1	23	6208.70	1019.39	0.000

		parameters	

	AT_1	1	23	6208.70	1019.39	
	AT ₂	1	23	6208.70	1019.39	
DLC (N)	BT	1	23	50.461	6.4929	0.000
DLC (II)	AT ₁	1	23	50.483	6.4921	0.000
	AT ₂	1	23	50.452	6.2132	
DLC(L)	BT	1	23	50.461	6.4929	0.000
(_)	AT ₁	1	23	50.483	6.4921	
	AT ₂	1	23	50.452	6.2132	-
DLC(M)	BT	1	23	4.043	1.2947	0.001
	AT_1	1	23	3.991	1.3341	-
	AT ₂	1	23	3.970	1.2502	-
DLC(E)	BT	1	23	2.43	1.080	0.000
	AT_1	1	23	2.42	1.080	
	AT_2	1	23	2.32	1.079	
DLC(B)	BT	1	23	0.683	0.4345	0.000
	AT ₁	1	23	0.683	0.4345	
	AT ₂	1	23	0.704	0.3914	
RBS	BT	1	23	96.48	5.044	0.000
	AT ₁	1	23	97.00	5.745	
	AT_2	1	23	96.17	3.563	
Pus cells in	BT	1	23	58.99	14.621	0.000
urine						
	AT ₁	1	23	53.13	9.711	
	AT ₂	1	23	45.61	5.945	
Epithelial	BT	1	23	58.78	14.625	0.000
cells in urine						
	AT_1	1	23	53.13	9.721	
	AT_2	1	23	45.61	5.956	
Others	BT	1	23	170.35	26.476	0.000
(presence of						
bacteria)						
	AT_1	1	23	168.61	25.919	
	AT_2	1	23	155.13	14.571	

From the above table, it is clear that Group 1 i.e *Mutravirechaniya Mahakashaya* along with *Madhuyashti Churna is* more effective in the management of chronic renal failure. These drugs have marked improvement in urine examination especially Total Number of pus cells, Epithelial cells and any other findings like the presence of bacteria etc in the urine Before Treatment and after 2nd follow up Treatment. While on the other hand, it has mild improvement in haemoglobin and platelet count, whereas on the other hand it has no effect on TLC, DLC etc.

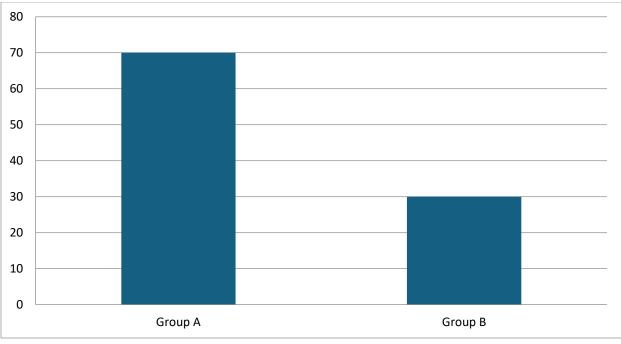
Table 3- Showing impact of drugs on objective parameters of group 2 patients: -

Variables		Group	Ν	Mean	Standard	Sig.
					deviation	(Mauchly's test of sphericity) of diff b/w two groups
Hb gm%	BT	2	23	10.696	0.4467	0.000
	AT ₁	2	23	10.696	0.4467	
	AT ₂	2	23	10.713	0.4506	

PLATELET COUNT	BT	2	23	1.6487	0.14729	0.000
	AT ₁	2	23	1.6478	0.14814	
	AT ₂	2	23	1.6470	0.15884	
TLC	BT	2	23	6208.70	1019.39	0.000
	AT_1	2	23	6208.70	1019.39	
	AT ₂	2	23	6208.70	1019.39	
DLC	BT	2	23	50.461	6.4929	0.000
	AT ₁	2	23	50.483	6.4921	
	AT ₂	2	23	50.452	6.2132	
DLC(N)	BT	2	23	50.461	6.4929	0.000
	AT ₁	2	23	50.483	6.4196	
	AT ₂	2	23	50.452	6.2132	
DLC(M)	BT	2	23	4.043	1.2947	0.001
	AT_1	2	23	3.991	1.3341	
	AT ₂	2	23	3.970	1.2502	
DLC(E)	BT	2	23	2.43	1.080	0.000
	AT ₁	2	23	2.41	1.079	
	AT ₂	2	23	2.41	1.079	
DLC(B)	BT	2	23	0.683	0.4345	0.000
	AT_1	2	23	0.683	0.4345	
	AT ₂	2	23	0.704	0.3914	
RBS	BT	2	23	96.48	5.044	0.000
	AT_1	2	23	97.00	5.745	
	AT ₂	2	23	96.17	3.563	
Pus cells in urine	BT	2	23	44.70	9.641	0.000
	AT_1	2	23	44.17	9.301	
	AT ₂	2	23	41.48	5.696	
Epithelial cells in urine	BT	2	23	56.78	13.625	0.000
	AT ₁	2	23	54.78	13.425	
	AT ₂	2	23	50.78	12.899	
Others	BT	2	23	170.35	26.476	0.000
(presence of bacteria)						
,	AT ₁	2	23	168.61	25.919	
	AT ₂	2	23	155.13	14.408	

From the above table, it is clear that Group 2 i.e *Mutravirechaniya Mahakashay* is effective in the management of chronic renal failure. These drugs have moderate improvement in urine examination especially Total Number of pus cells, Epithelial cells and any other findings like the presence of bacteria etc in the urine present before Treatment and after 2nd

follow up Treatment. While on the other hand, it has no improvement in haemoglobin, TLC, DLC etc. From the study of above two tables we will find that Group 1 i.e *Mutravirechaniya Mahakashaya* along with *Madhuyashti* churna is clinically much more effective than that of *Mutravirechaniya Mahakashaya* alone in the management of *Pittaja Mutrakruccha*.



IV. DISCUSSION

In Pittaja Mutrakruccha, we come across Burning Micturation followed by mild to severe pain in genital organs and increased urine frequency depending upon the severity of the disease. Similarily, when we read Vrikka Roga Prakarana of Bhaishajya Ratnavali while explaining about Chikitsa. patient is advised to undergo Virechana, Swedana & drug use (especially those having Mutrala which are properties & Raktashodhaka properties).

In this Research Paper, when comparative Study of two groups was done, in order to find out the clinical efficiacy of Mutra Virechaniya Mahakashaya along with Madhuyashti Churna in the management of Pittaja Mutrakruccha (UTI), we found that Mutravirechaniya Mahakashaya along with Churna Madhuyashti is more useful than Mutravirechaniya Mahakashaya along & alone when given in the patients of Pittaja Mutrakruccha. This Mode of action of drug might be due to the fact that Mutra is composed of Jala and Agnipanch-Mahabhuta. So, the substances that induce or increase it shall be both Sheeta and Ushnavirya. Aagneya Dravya increase urine load by increasing the blood load in the ureters and by causing irritation in the kidneys, they increase the secretion of urine. Sheetavirya Dravya are like Trinapanchmoola, Varuna and Ushnavirya Dravya are Maricha, Punarnava. Other than these Mutrala Dravya are Madhura, Amla and Lavana Rasa are involved. These Dravyas are Drava and Upkaledi. Mutravirechaneeya Mahakshaya are the best diuretics and involve Vrikshadani, Gokshura, Vasuka, Vashera, Pashanabheda, Darbha, Kusha, Kasha, Gundra and Itkatmoola⁻

Similarly when we talk about The drug Madhuyashti churna, it has Madhura Rasa, Guru, Snigdhaguna, Madhuravipaka, Sheetavirya, Pitta-Kapha-Vatashamaka and Medhya Prabhava property. Acharya Charaka include Madhuyashti Churna with Ksheer in Medhya Rasayanas which are known for their action on higher mental faculties like Buddhi, Medha etc. Madhuyashti is having Madhura Rasa followed by Kashaya Rasa. Madhura Rasa is said to be Shadeendriyaprasadaneeya and therefore must have a direct effect over the site of these Indrivas. Due to the presence of Madhura Rasa, Sheeta Virya and Madhura Vipaka, Yashtimadhu is expected to pacify the Pitta, the main responsible factor of Pittaja Mutrakruccha (UTI). By Guru, Snigdha Guna and Madhura Vipaka it controls the Chala Guna of Vata. Vata is responsible for all types of Pain.Vatapita Shamaka effect of drugs may thus help in correction of deranged Pitta and Vata which leads to the normal physiological functioning of systems of body as well as brain, which in turn is also responsible for reducing frequency of the urine. Hence, we can say Group 1 is more effective than that of Group B alone in the management of Pittaja Mutrakrucchra (UTI).

V. CONCLUSION

From the above study, it is clear that Group 1, Patients of Pittaja Mutrakruccha (UTI) which are treated with Mutravirechaniya Mahakashaya along with Madhuyashti Churna have more significant results than that of Group 2.

Finally, what we concluded from this Research is that Pittaja Mutrakruccha (Urinary tract infection) is a global issue of concern due to associated long term compromise in the quality of life and this Urinary Tract Infections which is mentioned in Modern Medicine, had very much similarity with Mutrakruccha. About Mutrakruccha we all know that it is an important cause of renal damage. Mutrakruccha is basically a Tridoshaja and Vata Predominant, disease and is involving the Mutravaha Srotas with the Dushti of Mutra and Ambu. Primary prevention (i.e. Nidanprivarjanam) strategy has been given priority, in both Ayurveda as well as in modern medicine. Patient should maintain their proper hygiene to decrease the risk of UTI, as maximum number of Urinary Tract infections are caused by micro-organism itself. Teaching about good hygiene by Parents, can help in prevention of UTI in children, and maintaining healthy hydration and by being aware your child's daily bathroom Scope-

Since this Research was conducted on small sample size of 46 Patients and maximum patients selected were mainly those cases, where yet no complications have developed, hence more research is required in this field, that too on large sample size with all odd and even factors before coming to any conclusion.

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