

A Comparative Clinical Assessment to Evaluate the Efficacy of Mootrakrichhaghi Peya and Yogasana in Mootrakrichha (Urinary Tract Infection)

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ABSTRACT

Background: Mootrakrichha is a clinical entity mentioned in Ayurveda, characterised by pain and difficulty during micturition; it was found to correspond very much with Urinary Tract Infections (UTI). Although conventional antibiotics work, recurrence and drug resistance are common.

Objective(s): To assess and compare the effectiveness of Mootrakrichhaghi Peya and Yogasana in the management of Mootrakrichha.

Methods: Prospective clinical study of 40 patients. Group A (n=20) patients were given Mootrakrichhaghi Peya (prepared with Gokshura and Kantakari), while Group B (n=20) received the Peya along with yogasanas, that is Suptavajrasana, Ardha Matsyendrasana, Sarvangasana, and Moolabandha for 42 days.

Results: The response rate of symptoms was statistically significantly superior in group B. A total of 11 patients (55%) achieved maximum improvement, and 9 (45%) achieved moderate improvement in Group A. Group B represented 13 (65%) patients with maximum improvement and 7 (35%) with moderate improvement. Both groups showed significant decreases in pus cells and ESR.

Conclusion: Peya with Yogasana shows superior efficacy than diet alone in the case of Mootrakrichha management

Keywords: Mootrakrichha, UTI, Mootrakrichhaghi Peya, Gokshura, Yogasana

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INTRODUCTION

Mootrakrichha, according to Ayurveda, is categorised as a disease of the *Mutravaha Srotas* (urinary system). The *Pratyatma Lakshana* of *Mootrakrichha* is “*Dukhena Mootra Pravritti*”, which means discomfort during Micturition.⁽¹⁾ (*Mootra* = urine, *Krichha* = difficult/painful). *Lakshanas* such as pain, which can be annoying when one experiences it every time during urination. It can be correlated symptomatically with dysuria.⁽²⁾In modern medicine, these symptoms may indicate the presence of Urinary Tract Infections (UTIs), which are one of the main global health burdens, particularly among females. The Sushruta Samhita and Charaka Samhita highlight the role of *Ahara* (diet) and

Vihara (lifestyle) in managing urinary disorders. *Mootrakrichhaghi Peya* is a liquid dietary preparation used for the pacification of *Vata* and *Pitta* in the urinary tract.⁽³⁾ At the same Yogasana improves blood circulation in the pelvic area and metabolic activity.⁽⁴⁾This study assesses a holistic Ayurvedic approach to offer sustainable treatment for UTI.

MATERIALS AND METHODS

A prospective, open-label, non-randomised clinical trial was conducted to assess the efficiency of *Mootrakrichhaghi Peya* alone and with Yogasana in managing *Mootrakrichha* (Urinary Tract Infection-related ailment). Various Ayurvedic classics, along with

modern medical textbooks and journals, were reviewed. The trial was performed at Shri Khudadad Dungaji Government Ayurveda College and Hospital, with CTRI registration (CTRI/2024/05/067544). Following informed consent, forty patients (18–70 years) were included in the study, excluding those with malignancy, obstructive uropathy, severe renal disorders, pregnancy or lactation and unwilling. All participants were divided

into two groups (n=20): Group A was given *Mootrakrichhaghi Peya*, and Group B was given Yogasana (Suptavajrasana, Ardha Matsyendrasana, Sarvangasana, Moolabandha) along with the same. A detailed medical history was taken, with particular focus on symptoms (burning micturition and frequency) and laboratory parameters (CBC, ESR, urine routine and microscopic, urine culture).

Table 1 - Sample Size and Grouping

A total of 40 patients were selected and divided into two groups:

Group	Intervention	Patients
Group A	Mootrakrichhaghi Peya	20
Group B	Mootrakrichhaghi Peya + Yogasana	20

Treatment duration was 42 days, with follow-up every 7 days and post follow-up after 7 days.

Table 2 - POSOLOGY OF STUDY

S.N	Group	A	B
1	Advise	<i>Mootrakrichhaghi peya</i>	<i>Mootrakrichhaghi peya and yogasana</i>
2	Route/form/dose/frequency /anupan	Oral/Aahara(liquid) 1/4rth at patient's appetite/as per appetite/ 2 times	<i>Mootrakrichhaghi peya and yogasana</i>
3	Duration of treatment	42 days	42 days
4	During treatment follow-up	Every 7 days	Every 7 days

Yoga Modalities- The patient was advised to perform selected yogasanas for 42 days under supervision.

Table 3 - Yoga Protocol for *Mootrakrichha* (Figure 2)

S.N.	YOGA	Duration
1	SUPTAVAJRASAN	6 rounds
2	ARDHA MATSYENDRASAN	8 rounds
3	SARVANGASAN	4 rounds
4	MOOLABANDHA	4 repetitions

Phytochemical Analysis Tables

Table 4 - Name of Drug: Gokshura kwath churna

Parameter	Sample Value
Loss on drying (%)	4
Total ash (%)	12
Acid insoluble ash (%)	1.33
Water-soluble extractive (%)	13
Alcohol-soluble extractive (%)	8
Colour	Light brown

Taste	Sweet and astringent
Appearance	Coarse powder
Odour	Aromatic

Table 5 - Name of Drug: Kantakari kwath churna

Parameter	Sample Value
Loss on drying (%)	3.5
Total ash (%)	20
Acid insoluble ash (%)	10
Water-soluble extractive (%)	16.2
Alcohol-soluble extractive (%)	10.4
Colour	Light brown
Taste	Bitter
Appearance	Coarse powder

ASSESSMENT CRITERIA

Assessment of patients was carried out using both subjective and objective parameters before treatment and at each follow-up interval.

TABLE 6 - GRADING OF CLINICAL SYMPTOMS

Parameter	Score 0	Score 1	Score 2	Score 3
Sadaham (Burning Micturition)	Absent	Mild	Moderate	Severe
Sarujam (Painful micturition)	Absent	Mild	Moderate	Severe
Tivartiru(Loin/Groin/Pelvic pain)	Absent	Mild	Moderate	Severe
Saraktam (Haematuria)	No RBC	0–5 RBC/HPF	5–10 RBC/HPF	>10 RBC/HPF
Muhurmootrata (Frequency of micturition)	<5 times/day	6–10 times	10–15 times	>15 times
Pus Cells in Urine	Nil	0–5/HPF	5–10/HPF	>10/HPF

Method of preparation of Mootrakrichhaghi Peya-

However, *Peya Kalpana* (Thin gruel) is prepared freshly. *Acharya Sharangdhar* suggests that one part rice be combined with fourteen components of water to yield a watery “*Peya*” consistency.⁽⁵⁾ Spices like Lavan, pippali, sunthi and maricha can be added according to taste. For *Mootrakrichhaghi peya*, use *Gokshura* and *Kantakari* as *Aushadh dravya*. Method of Preparation of *Aushadh Siddha Jal*. Ex.-Take 22 grams each of *Gokshura* and *Kantakari*, boil them in around 1400ml of water to reduce it to around 700ml and filter it. Take ¼ of the rice consumed for the day (for example, 50g when consuming 200g), mix it with 700ml *Aushadh siddha jal* and boil until cooked. Add some *phanita*. This gruel is called *Mootrakrichhaghi Peya* and may be taken twice a day.



Figure 1 -MOOTRAKRICHHAGHNI PEYA NIRMAN

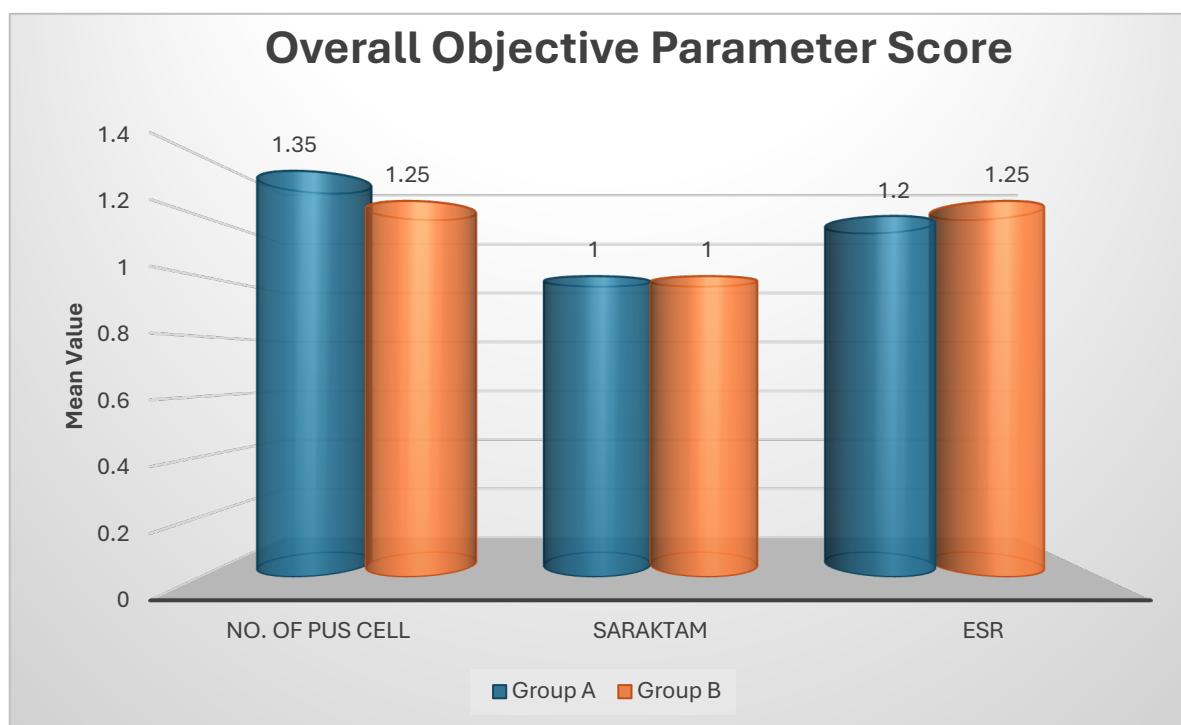


Figure 2 - YOGASANA PRACTICES

RESULTS-

Table 7 - Comparison of Objective Parameters after treatment between group A and B

Objective Variable	Mean		Mean Difference	% of Relief	S.D.	S.E.	z-value	P-value	Remark
	Group A	Group B							
No. of Pus Cell	1.35	1.25	0.1	7.4	0.641	6.364	-0.625	0.529	Not Significant
Saraktam	1.0	1.0	0.0	100.0	NA	NA	NA	NA	NA
ESR	1.2	1.25	0.05	4.2	NA	NA	NA	NA	NA

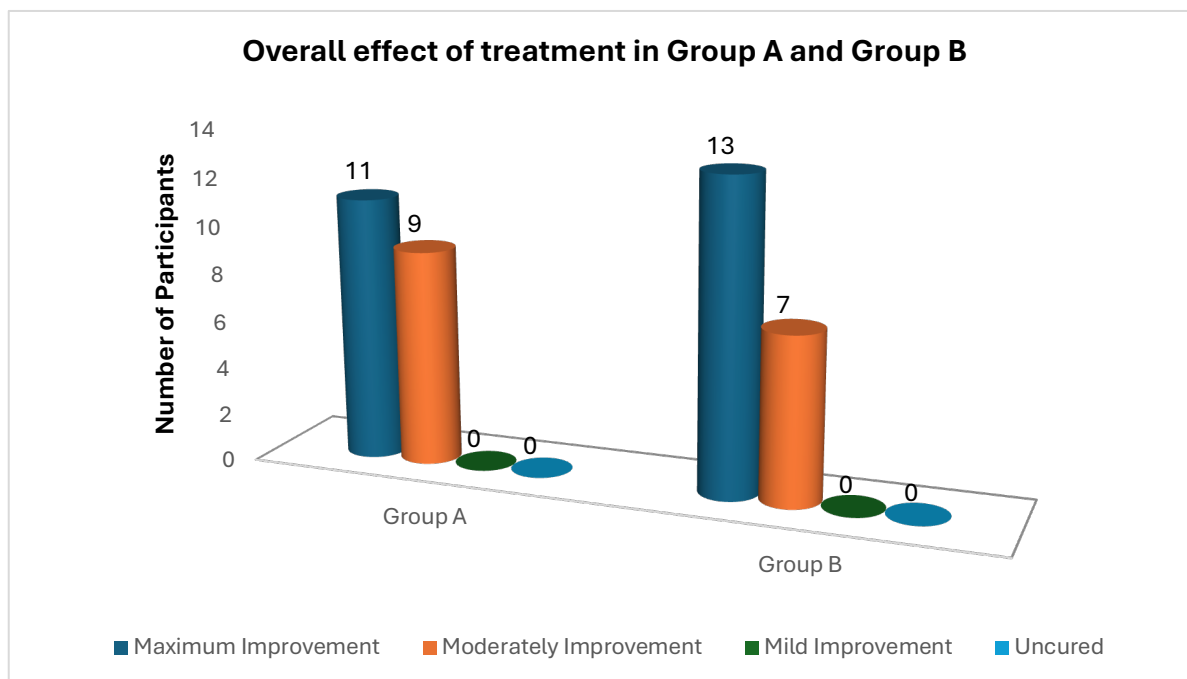


For the number of pus cells, the mean values were 1.35 in Group A and 1.25 in Group B, resulting in a mean difference of 0.1 and a relief percentage of 7.4%. Despite these values, the z-score of -0.625 and p-value of 0.529 confirmed that the difference was not significant. In the case of *Saraktam*, both groups recorded identical mean

values of 1.0, yielding no mean difference. Interestingly, the relief percentage was noted as 100%, but since all other statistical measures were not applicable, no further interpretation could be drawn. For ESR, the mean values were 1.2 in Group A and 1.25 in Group B, with a minimal mean difference of 0.05 and 4.2% relief.

Table 8 - Overall effect of treatment in Group A and Group B-

Result	No. of Patients Group A	Percentage	No. of Patients Group B	Percentage
Maximum Improvement	11	55.0	13	65.0
Moderately Improvement	9	45.0	7	35.0
Mild Improvement	0	0.0	0	0.0
Uncured	0	0.0	0	0.0
Total	20	100.0	20	100.0



Group A and Group B showed overall therapeutic effect after the full course of treatment protocol (Table 8). A total of 11 patients (55%) achieved maximum improvement, and 9 (45%) achieved moderate improvement in Group A. Group B represented 13 (65%) patients with maximum improvement and 7 (35%) with moderate improvement. Significantly,

there were no mild improvements or a status of being uncured in either group. Our results suggest that both interventions yield comparable rates of positive clinical outcomes. Nonetheless, Group B exhibited a relatively better therapeutic efficacy with a greater percentage of patients achieving maximum response.

A Comparative Clinical Assessment to Evaluate the Efficacy of Mootrakrichhaghi Peya and Yogasana in Mootrakrichha (Urinary Tract Infection)

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 Regd. Office: Dr Lal PathLabs Ltd, Block E, Sector 18, Rohini, New Delhi 110085
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Name : PURNIMA BAI YADAV
 Lab No. : 432048119
 Ref By : self
 Collected : 28/03/2025 10:34:00AM
 A/c Status : P
 Collected at : GROUND FLOOR, BHATIA COMPLEX, OPP RAJKUMAR COLLEGE, GE ROAD, CHHATTISGARH RAIPUR 492001

Age : 49 Years
 Gender : Male
 Reported : 29/03/2025 03:56 PM
 Report Status : Final
 Processed at : LPL RAIPUR
 C/O Modern Pathology Lab, Shop No 3,4,5,6 and 8, Ground Floor, Garcha Complex, Jail Road, Kutchery Chowk, Raipur, Chhattisgarh - 492001

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Name : PURNIMA BAI YADAV
 Lab No. : 492349189
 Ref By : self
 Collected : 24/05/2025 12:48:00PM
 A/c Status : P
 Collected at : GROUND FLOOR, BHATIA COMPLEX, OPP RAJKUMAR COLLEGE, GE ROAD, CHHATTISGARH RAIPUR 492001

Age : 49 Years
 Gender : Female
 Reported : 25/05/2025 11:17 AM
 Report Status : Final
 Processed at : LPL RAIPUR
 C/O Modern Pathology Lab, Shop No 3,4,5,6 and 8, Ground Floor, Garcha Complex, Jail Road, Kutchery Chowk, Raipur, Chhattisgarh - 492001

Test Report

Test Name	Results	Units	Bio. Ref. Interval
URINE EXAMINATION, ROUTINE; URINE, RE (Dipstick test, Microscopy)			
Physical			
Colour	Pale Yellow		Pale yellow
Specific Gravity	1.028		1.001 - 1.030
Ph	5.6		5.0 - 8.0
Chemical			
Proteins	Negative		Negative
Glucose	Negative		Negative
Ketones	Negative		Negative
Bilirubin	Negative		Negative
Urobilinogen	Negative		Negative
Leucocyte Esterase	Negative		Negative
Nitrite	Negative		Negative
Microscopy			
R.B.C.	Negative		0.0 - 2.0 RBC/hpf
Pus Cells	18-20 WBC/HPF		0-5 WBC / hpf
Epithelial Cells	88-10 Epi Cells/hpf		0.0 - 5.0 Epi cells/hpf
Casts	None seen		None seen/Lpf
Crystals	None seen		None seen
Others	None seen		None seen

BEFORE

Test Report

Test Name	Results	Units	Bio. Ref. Interval
URINE EXAMINATION, ROUTINE; URINE, RE (Dipstick test, Microscopy)			
Physical			
Colour	Pale Yellow		Pale yellow
Specific Gravity	1.032		1.001 - 1.030
Ph	5.3		5.0 - 8.0
Chemical			
Proteins	Negative		Negative
Glucose	Negative		Negative
Ketones	Negative		Negative
Bilirubin	Negative		Negative
Urobilinogen	Negative		Negative
Leucocyte Esterase	Negative		Negative
Nitrite	Negative		Negative
Microscopy			
R.B.C.	Negative		0.0 - 2.0 RBC/hpf
Pus Cells	1-2 WBC/HPF		0-5 WBC / hpf
Epithelial Cells	0-1 Epi Cells/hpf		0.0 - 5.0 Epi cells/hpf
Casts	None seen		None seen/Lpf
Crystals	None seen		None seen
Others	None seen		None seen

AFTER

DISCUSSION

Mootrakrichha is described in Ayurvedic classics as difficulty and pain in micturition, which correlates clinically with urinary tract infection (UTI). The current comparative clinical study was performed to assess the therapeutic efficacy of *Mootrakrichhaghi Peya* alone & various combinations of *Yogasanas* in patients suffering from *Mootrakrichha*.

The clinical evaluation showed marked improvement in both treatment groups, with better effectiveness achieved with the combined therapy of *Mootrakrichhaghi Peya* and *Yogasana*. There was a significant decrease in burning micturition, the frequency of micturition, painful urination, pelvic pain and pus cells on urine examination. These results suggest that *Yogasana* was a valuable adjunct therapy in improving overall treatment response.

Mootrakrichha, as per Ayurvedic texts, is primarily caused due to the vitiation of *Vata* and *Pitta* of the body,

which adversely affects *Mootravahasrotasa*. While aggravated *Vata* creates obstruction and discomfort, *Pitta* causes a burning sensation and inflammation during urination. Common dietary habits like High consumption of spicy, sour and salty food, suppression of natural urges and poor lifestyle practices lead to an imbalance in the *Dosha*, causing a disease Manifestation. In modern medicine, UTI is described as inflammation of the urinary tract, generally due to ascending bacterial infection, which also supports clinical similarity between *Mootrakrichha* and UTI.

Demographically, most of the cases involved females and individuals aged less than 35, which correlates with more recent epidemiological data because of anatomical vulnerability and fewer lifestyle-affected factors. Such predominance of *Vata-Pitta Prakriti* individuals also justifies Ayurvedic pathogenesis of the disease.

Table 9 - Mode of Action of Mootrakrichhaghi Peya and Yogasana

MOOTRAKRICHHAGHNI PEYA	YOGASANA PRACTICE
(Gokṣura + Kaṇṭakari +Phanita)	Supta Vajrasana, Ardha Matsyendrasana,
↓	Moola Bandha, Sarvangasana
Mootrala Effect (Gokṣura)	↓
↑ Urine output → Flushing of irritants	↑ Pelvic Blood Circulation & Relaxation
↓	↓
Sothahara Effect (Both Dravyas)	Supta vajrasana (Relaxation),
↓ Inflammation → ↓ Pain, ↓ Swelling	↓ Pelvic spasm, Smooth urine flow
↓	↓
Krimighna / Antimicrobial (Kaṇṭakari)	Ardha Matsyendrasana (Twisting),
↓ Bacterial load → Relieves UTI-like symptoms	Improves Apana Vayu, ↓ Obstruction
↓	↓
Vatanulomana (Mainly Gokṣura)	Moola bandha (Pelvic Lock),
Smooth urine flow → ↓ Straining	Strengthens pelvic floor, ↓ Frequency
↓	↓
Pittahara & Dahahra (Gokṣura)	Sarvangasana (Neuro-Endocrine Balance),
↓ Burning → ↓ Irritation	↓ Stress, ↓ Inflammation, Calmness
↓	↓
Phanita (Digestive + Anulomana Action)	↓ Pain ↓ Burning ↓ Frequency ↓ Spasm,
Improves Agni, soothes urinary tract, supports absorption, mild Madhura → ↓ Daha	Improved Bladder Function
↓	OVERALL RELIEF IN MOOTRAKRICHHA
OVERALL RELIEF IN MOOTRAKRICHHA	Smooth Micturition, Less Dysuria
Pain ↓ Burning ↓	
Flow Improved Dysuria Relieved	

Mootrakrichhaghi Peya has drugs that have *Mootrala* (Diuretic), *Shothahara* (Anti-inflammatory), and *Pittashaman* properties.⁽⁶⁾ These actions flush out infectious agents, reduce inflammation and the burning sensation during voiding, and improve urination frequency and urinary stream. The formulation also contains phytoconstituents that may have an antimicrobial action and contribute to symptomatic relief.

Practices of *Yogasana* strengthen the pelvic muscles, improve local circulation and autonomic function, and

facilitate adequate bladder emptying.⁽⁷⁾ Better circulation and muscle tone enhance recovery rate and lessen the chance of further symptoms.⁽⁸⁾ Therefore, the combined approach has both symptomatic and pathophysiological effects. The Ayurvedic dietary formulation integrated with *Yogasana* is a specific, safe, effective, and holistic management for *Mootrakrichha*. Enhanced clinical efficacy of combined therapy over single modality treatment suggests it to be beneficial in the management of urinary tract infections.

CONCLUSION

In the present comparative clinical study, it was conclusively found that *Mootrakrichha*, identical to urinary tract infection primarily due to vitiation of *Vata* and *Pitta Dosha*, produced defective functioning of *Mootravaha Srotas*. A multitude of explanations were offered for this state, including unhealthy eating habits, harmful lifestyle choices and the suppression of innate drives. The study shows that *Mootrakrichhaghi Peya* is an efficacious, nonpharmacological and cost-effective adjuvant therapy for the management of *Mootrakrichha* (UTI) with Yogasana. Such a holistic treatment pathway not only minimises symptomatic manifestations but also improves the quality of life and decreases recurrence rates. The study found that the *Mootrakrichhaghi Peya* is therapeutically efficacious and significantly reduced the main symptoms of *Mootrakrichha*, namely dysuria, painful urination, an increased frequency of urination, as well as a reduction in accompanying complaints.⁽⁹⁾ However, those patients treated with a combinatorial therapy of *Mootrakrichhaghi Peya* and Yogasana showed a significantly better clinical outcome.

The combined methods offered significantly better symptomatic relief, greater laboratory parameter improvement and lower relapse rate at follow-up than with drug therapy alone. The role of *Apana Vata* control by Yogasana practice in improving the blood circulation to the pelvic region, which is also one of the reasons for the normalcy of urinary function, can further establish the role of *Peya* formulation particle.⁽¹⁰⁾

They also found that the therapy was safe and cost-effective, with the benefit of being well-tolerated by patients and applicable to long-term care for the condition. Thus, an integrated approach of Ayurvedic dietary formulation and Yogic intervention is a holistic and effective management for *Mootrakrichha* (UTI). As indicated by these findings, it is recommended that large-scale clinical trials be carried out with an even larger number of patients and over a longer timeframe in order to put on record substantiated benefits observed in therapy.

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