



Ayurveda

A COMPARATIVE CLINICAL ASSESSMENT OF KOSHTA USING KSHEERA, IKSHURASA AND DRAKSHARASA IN SWASTHA INDIVIDUALS: A CLINICAL STUDY.

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ABSTRACT **Background:** Assessment of Koshta is an essential prerequisite before planning Panchakarma procedures, especially Shodhana. Accurate assessment helps to determine the appropriate dose, duration and expected response to Shodhananga snehapana. Classical Ayurvedic texts describe various methods for assessing Koshta, including the administration of Ksheera, Ikshurasa, Triphala rasa, Peelurasa and Draksharasa etc. Each producing bowel evacuation according to the individual's Koshta. **Aim:** To assess Koshta using Ksheera, Ikshurasa and Draksharasa in healthy individuals. **Materials and Methods:** A comparative clinical study was conducted on 15 participants divided into three groups of five each. Group A received Ksheera, Group B received Ikshurasa and Group C received Draksharasa on an empty stomach. Parameters such as frequency of bowel movements, stool consistency, time of bowel evacuation, associated symptoms and inferred Koshta were recorded. The observations were compared among the three groups. **Results:** Among the 15 participants assessed for Koshta using Kshira, Ikshurasa, and Draksharasa, variations in bowel response were observed following administration of 500 mL of the respective Drava Dravya. Bowel evacuation was observed in 5 participants, while 3 participants reported mild gastrointestinal discomfort and remaining 7 participants did not experience bowel evacuation or any significant discomfort. The observed variation in bowel response may reflect differences in individual Koshta and sensitivity to the administered Drava Dravya. Participants who developed loose bowel evacuation may suggest a comparatively mridu koshta, whereas the absence of bowel evacuation in the remaining participants may indicate a krura koshta. **Conclusion:** Ksheera, Ikshurasa and Draksharasa can serve as practical clinical tools for Koshta assessment. Their use may help to individualize Panchakarma planning and improve therapeutic outcomes.

KEYWORDS : Koshta, Ksheera, Ikshurasa, Draksharasa, Panchakarma.

INTRODUCTION

Ayurveda emphasizes individualized treatment based on Prakriti, Dosha, Agni and Koshta. Among these, Koshta plays a pivotal role in determining the response of the gastrointestinal tract to Sneha and Shodhana therapies. Improper assessment of Koshta may result in inadequate oleation, delayed purification or procedure-related complications.

Definition of Koshta

The term "Koshta" is explained in 2 senses in Ayurveda. Anatomically, Koshta means the space or hollowness of the body for accommodation of organs including stomach, liver, spleen, pancreas, intestine, urinary bladder and lower part of bowel¹ etc. Physiologically, Koshta is defined as bowel movement according to the basic constitutions of the person which is broadly classified into three types—Mridu Koshta, Madhyama Koshta and Krura Koshta—and is an important consideration in Panchakarma procedures.

Types of Koshta and its Relation with Dosha

Types of Koshta	Charaka samhita ²	Sushruta samhita ³	Ashtanga hrudaya ⁴	Ashtanga sangraha ⁵
Mridu Koshta	Udirna Pitta Alpa kapha Manda maruta	Pitta	Pitta	Bahupitta
Madhyama/ Sadharana koshta	-	Samadosha	Kapha	Bahukapha/ Samadosha
Krura koshta	Ulbana anila	Vata, Kapha	Vata	Bahuvata

Among these three types, Acharya Arunadatta, in his commentary, has further explained the distinction between Madhyama Koshta arising from Kapha predominance and that occurring due to a balanced state of the three Doshas⁴. As Kapha possesses a yogavahi nature and modifies its effect according to the Dosha with which it combines. When Kapha associates with Vata, it contributes to the development of Krura Koshta, whereas its association with Pitta results in Mridu Koshta.

Characteristic Features of Koshta⁶

गुडमिक्षुरसं मस्तु क्षीरमुल्लोडितं दधि पायसं कृशरां सर्पिः काश्मर्यत्रि-
फलारसम्॥
द्राक्षारसं पीलुरसं जलमुष्णमथापि वा। मद्यं वा तरुणं पीत्वा मृदुकोष्ठो विरिच्यते॥
विरेचयन्ति नैतानि कूरकोष्ठं कदाचन। भवति कूरकोष्ठस्य ग्रहण्यत्युल्बणानिला॥
उदीर्णपित्ताऽत्यकफा ग्रहणी मन्दमारुता। मृदुकोष्ठस्य तस्मात् सुविरेच्यो नरः
स्मृतः॥

Acharya Charaka describes that individuals with Mridu Koshta may undergo easy bowel movement even with relatively mild substances such as jaggery, buttermilk, milk, curd, ghee and fresh wine etc. However, these substances may not produce adequate bowel movement in individuals with Krura Koshta because of the predominance of Vata in Grahani. In Mridu Koshta, the Grahani is predominantly influenced by Pitta, with comparatively alpa kapha and manda maruta, resulting in easier bowel evacuation and purification. So based on this principle the present study was done.

AIM

To comparatively assess Koshta using Ksheera, Ikshurasa and Draksharasa in Swastha individuals.

OBJECTIVES

- To assess koshta following administration of Ksheera.
- To assess koshta following administration of Ikshurasa.
- To assess koshta following administration of Draksharasa.
- To compare the effectiveness of these three media in identifying Koshta.

MATERIALS AND METHODS

Study Design and Participants

A comparative clinical study was conducted on 15 healthy participants, with five participants allocated to each group.

- Group A: Ksheera (n=5)
- Group B: Ikshurasa (n=5)
- Group C: Draksharasa (n=5)

Inclusion Criteria

- Healthy volunteers
- Age 20–30 years
- Willing to participate.

Exclusion Criteria

- Gastrointestinal disorders
- Diabetes mellitus (particularly for Ikshurasa)
- Lactose intolerance (for Ksheera)
- Pregnancy and lactation
- Acute systemic illness.

Intervention

All participants underwent one day of Deepana-Pachana with Chitrakadi Vati at a dose of 1 tablet three times (1 TID) before the day of koshta assessment.

Dravyas used for Koshta Assessment

Kshira (Cow's Milk): Freshly collected cow's milk was used. The milk was boiled and allowed to cool to a lukewarm temperature before administration.

Ikshurasa (Sugarcane Juice): Fresh sugarcane juice was extracted using a mechanical juice-extraction machine and administered immediately in its fresh state.

Draksharasa (Grape Juice): Fresh green grapes were selected, washed thoroughly, and their juice was extracted freshly and used immediately for Koshta assessment.

On the study day baseline vitals and bowel history were recorded. Then Koshta assessment dravya of a quantity of 500ml which was calculated based on the total volume of stomach is 1500ml. With due consideration to the quantity of fluids permitted for intake and allowing the free movements of other gaseous substances and secretions as mentioned in Charaka Samhita, is 1/3rd of the stomach capacity⁷, with the stomach capacity being 1500/3=500ml was administered to each individual at 8:30 AM on an empty stomach but not feeling hungry.

Observation Parameters

- Koshta assessment
- Time of bowel movement
- Frequency of bowel evacuation
- Stool consistency
- Any adverse events.

RESULT

A total of 15 healthy participants were included in the study. Five participants were assessed using Ksheera, five using Ikshurasa and five using Draksharasa.

Table 3. Comparison of Bowel Response Among the Three Groups

Parameter		Ksheera (n=5)	Ikshurasa (n=5)	Draksharasa (n=5)
No. of vegas	Participants with ≥ 1 Vega	1 (20%)	1 (20%)	3 (60%)
	Participants with 0 Vegas	4 (80%)	4 (80%)	2 (40%)
	Maximum number of Vegas	1	1	2
Consistency of stool	Loose consistency	0	0	1
	Semisolid consistency	1	1	1
	Solid consistency	0	0	1
Time taken for initiation of vega		2 h 30 min	4 h	2 h 20 min - 3 h 45 min
Koshta (Based on classics)		Mridu koshta - 1 Krukoshtha - 4	Mridu koshta - 1 Krukoshtha - 4	Mridu koshta - 3 Krukoshtha - 2

Sl. NO	Dravya used	Gen der	Bowel movement on the day	No. of vegas	Time of initiation of vegas	Consistency of each vega	Any other discomforts
1.	Kshira	F	Passed	0	-	-	-
2.	Kshira	M	Passed	0	-	-	-
3.	Kshira	F	Passed	1	11:00 AM	Semi-solid	Abdominal discomfort
4.	Kshira	M	Passed	0	-	-	-
5.	Kshira	M	Passed	0	-	-	-
6.	Ikshurasa	M	Passed	0	-	-	-
7.	Ikshurasa	M	Passed	0	-	-	-
8.	Ikshurasa	F	Passed	0	-	-	-
9.	Ikshurasa	F	Passed	0	-	-	Burning sensation in epigastric region
10.	Ikshurasa	M	Not passed	1	12:30 PM After taking food	Semi-solid	-

11.	Draksharasa	F	Passed	1	11:40 AM	Semi-solid	Abdominal discomfort
12.	Draksharasa	M	Passed	0	-	-	Sour belching.
13.	Draksharasa	M	Passed	0	-	-	Burning sensation in epigastric region.
14.	Draksharasa	F	Not passed	1	12:15 PM	Solid	-
15.	Draksharasa	F	Passed	2	10:50 AM, 11:20 AM	Loose	-

Statistical Analysis

Since this study was with a small sample size of 15 participants, descriptive statistics were primarily used. Categorical variables were expressed as frequency and percentage.

For comparison of the proportion of participants developing at least one Vega among the three groups, the Chi-square test was applied. Bowel activity was observed in 1 participant (20%) in the Ksheera group, 1 participant (20%) in the Ikshurasa group and 3 participants (60%) in the Draksharasa group.

The difference in bowel activity among the three groups was not statistically significant ($\chi^2 = 2.40$, $p = 0.301$).

The number of Vegas was analyzed using the Kruskal-Wallis test because of the small sample size and ordinal/non-normal nature of the observations. The mean number of Vegas was 0.20 ± 0.45 in the Ksheera group, 0.20 ± 0.45 in the Ikshurasa group and 0.80 ± 0.84 in the Draksharasa group. The difference was not statistically significant ($H = 2.64$, $p = 0.267$).

Statistical Interpretation

Although Draksharasa demonstrated a numerically higher bowel response (60%) compared with Ksheera (20%) and Ikshurasa (20%), the difference was not statistically significant ($p > 0.05$). Similarly, no statistically significant difference was observed in the number of Vegas among the three groups.

Therefore, the present pilot study does not establish a statistically significant difference between Ksheera, Ikshurasa and Draksharasa in producing bowel activity. The comparatively higher response observed with Draksharasa may be considered a preliminary clinical observation requiring confirmation in a larger sample.

DISCUSSION

Koshtha assessment is an essential component of Panchakarma practice because it helps to determine the dose and duration of Shodhananga Snehapana and predicts an individual's response to Shodhana therapy. Classical Ayurvedic literature recommends the use of Ksheera, Ikshurasa and Draksharasa etc. for assessing bowel responsiveness; however, comparative clinical evidence regarding these methods is limited.

In the present pilot study, bowel evacuation was observed in only five of the fifteen participants. Among the three assessment media, Draksharasa demonstrated the highest bowel response, producing bowel evacuation in three participants (60%), whereas Ksheera and Ikshurasa each produced bowel evacuation in one participant (20%). The 3 participants developed with abdominal discomfort and remaining 7 participants did not experience any discomfort or bowel evacuation after administration of the respective media.

The relatively higher bowel response observed with Draksharasa may be attributed to its Madhura Rasa, Sara and Snigdha Gunas, Shita Virya, and Madhura Vipaka, along with its classical description as Srishta mutra vit kara and Vatanulomaka. These properties may facilitate bowel lubrication, soften the stool and promote bowel evacuation in susceptible individuals. In 1 participant Burning sensation in epigastric region and in 1 participant Sour belching was observed which may be due to amla as anurasa of draksha.

Kshira possesses Madhura Rasa, Guru and Snigdha Gunas, which nourish the tissues and pacify Vata and Pitta Doshas. Although it possesses mild bowel-softening properties, a bowel response was

observed in only one participant.

Similarly, Ikshurasa, being predominantly Madhura rasa, Sheeta, Sara and Snigdha guna, acts as a mild bowel-stimulating medium, helping to assess the individual's intestinal response and tendency for bowel evacuation. However, bowel evacuation was observed in only one participant and in 1 participant there is burning sensation in chest region which may be due to the vidahi nature of sugarcane juice which is extracted by mechanical juice extractor.

Interestingly, two-thirds of the participants (66.7%) did not exhibit bowel evacuation following administration of any of the three media. This finding suggests that Koshta is influenced by factors such as Agni, Dosha predominance, habitual bowel pattern, dietary habits and individual physiology etc. Hence bowel evacuation alone should not be considered the sole criterion for Koshta assessment. Comprehensive clinical evaluation remains essential before planning Shodhananga Snehapana.

The observations support the Ayurvedic principle of individualized assessment prior to Panchakarma and emphasize the need for standardized protocols to validate these classical Koshta assessment methods in larger populations.

CONCLUSION

The present study demonstrated that bowel evacuation following administration of classical Koshta assessment media was observed in 5 of the 15 participants (33.3%). Among the three interventions, Draksharasa showed the highest bowel response (60%), while Ksheera and Ikshurasa each produced bowel evacuation in 20% of participants. Although the findings suggest that Draksharasa may produce a comparatively greater bowel response, the small sample size excludes definitive conclusions regarding its superiority. These classical assessment methods appear to be feasible clinical tools before Shodhananga Snehapana, but larger studies with standardized assessment criteria are required to establish their diagnostic utility.

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