

Analysis of *Virechana karma* with *Danti avaleha*: A retrospective study

Sreelakshmi Chaganti¹, B. S. Prasad¹

¹Department of Panchakarma, KLEU'S Shri BMK Ayurveda Mahavidyalaya, Belgaum, Karnataka, India

ABSTRACT

Virechana (therapeutic purgation) is a common procedure that is widely practiced among the *panchakarma* treatments (pentad treatments). Various *Virechaka dravyas* (purgative drugs) have been described for *Virechana*. Even after critical analysis of *Virechaka dravyas* in the literature, still there is difficulty in the fixation of dose. Hence, the retrospective analysis of varied outcomes of *Virechana* with *Danti* (*Baliospermum montanum*) *avaleha* (linctus) is discussed in this paper. The study included twenty-seven case reports of patients who were administered *Virechana* with *Danti avaleha*. These case reports are of patients suffering from various ailments such as irregular menstrual cycles, polycystic ovarian syndrome, primary and secondary infertility, and psoriasis. *Danti avaleha* was administered at dose of 10 g and 5 g in the *Krura* (~strong) and *Madhyama* (~moderate/normal) *Koshta* (~GI tract) patients, respectively. Among seven *Krura koshta* patients, three of them resulted with *Pravara* (excellent) *Shuddhi* and other four resulted with *Madhyama* (medium) *Shuddhi*. In twenty *Madhyama koshta* patients, sixteen of them resulted with *avara* (minimum) *Shuddhi* and remaining four patients resulted with *Madhyama shuddhi*. Complications like *Udara shoola* (spasmodic pain of abdomen) and *Vamana* (emesis) were observed during *Virechana*. Majority of the patients suffered with *Udara shoola* were of *Madhyama koshta*. *Vamana* was seen in both *Krura* and *Madhyama koshta* patients. Irrespective of the type of *Shuddhi* and complications, all the patients resulted with *Samyak Kaphaantiki Virikta lakshana* (signs of perfect purgation with end expulsion of *Kapha*). The study concluded that the *Krura koshta* patients were tolerable for dose of 10 g and are expected to attain *Pravara Shuddhi*. Whereas *Madhyama koshta* patients were intolerable even to mild dose of 5 g, producing *Avara shuddhi*.

Key words: *Danti*, *Koshta*, *Samyak kaphaanta lakshana*, *Virechana*

INTRODUCTION

Virechana is therapeutic purgation indicated for multiple conditions like *Pittaja vyadhi* (~disorders of pitta), *Kushta* (~skin diseases), *Meha* (~diabetes), *Udara* (~ascites), *Pandu* (~anemia), *Hridroga* (~cardiac diseases), *Vyanga* (~pigmentation diseases), *Swasa* (~asthmatic conditions), *Kasa* (~chronic cough), *Kamala* (~jaundice),

Apasmara (~epilepsy), *Unmade* (~psychic disorders), *Vatarakta* (~gout), *Yoni roga* (~gynecological disorders). For example, KLE Ayurveda Hospital Database has recorded total 714 *Virechana* procedures in the year 2014. *Virechana* has also been studied extensively by various researches and proven as efficacious over *Shamana* (palliative) type of treatment in various conditions like *Tamakashwasa*^[1] (~bronchial asthma), essential hypertension.^[2] Studies have also reported that *Virechana* found to be effective in curing and preventing the recurrence of *Vicharchika*^[3] (~eczema). *Virechana* was also found to be beneficial in chronic conditions like obese patients with *Prameha* (~type-2 diabetes).^[4] Comparative studies have also been conducted with two different purgative medicines to assess its efficacy on psoriasis.^[5]

Address for correspondence:

Dr. Sreelakshmi Chaganti,
Department of Panchakarma, KLEU'S Shri BMK Ayurveda
Mahavidyalaya, Shahapur, Belgaum, Karnataka, India.
E-mail: drsreeredy@gmail.com

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Numerous drugs have been described for *Virechana*. Critical analysis of these drugs with reference to their pharmacological actions and disease-specific formulations has been narrated. Different classifications of *Virechaka dravyas* were also mentioned in the literature depending on their action^[5] (*Virechaka* and *Virechakopaga*), part^[6] and potency^[7] of the drug used. Dose of these drugs has been decided depending on the form administered (powder/linctus/decoction etc.) which further depends on the type of *Koshtha* (~gastrointestinal tract).^[8] Even with all these critical inputs, there is difficulty in the fixation of dose within the patients of similar *Koshtha* and varied output (*Vegas*) of *Virechana* is observed. *Danti* (*Baliospermum montanum*) is the least practiced purgative drug as a prime medicine. The data with evidence provide authentic information for clinical application and practice of *Panchakarma*. Hence, the analysis of varied outcomes of *Virechana* with *Danti avaleha* administered to the patients at Department of *Panchakarma*, KLE Ayurveda hospital, Belgaum, has been discussed in this paper.

MATERIALS AND METHODS

The present study is a retrospective study of case report formats of patients who have undergone *Virechana* with *Danti Avalehya* in Department of *Panchakarma*, KLE Ayurveda Hospital, Belgaum.

Source of data

Outpatient department and inpatient department case report formats available at Department of *Panchakarma*, KLE Ayurveda Hospital, Belgaum.

Selection of case reports

Completed case reports of patients, who had undergone *Virechana* by *Danti avaleha*, are selected for the study. Total number of patients undergone *Virechana* were 30, but only 27 case reports were complete with all details which were selected in this retrospective study.

Case reports presented that patients have undergone prior evaluation for fitness of *Virechana* in the *Panchakarma* department. Hence, the patients with pathological conditions of *Annavaha Srotas* like *Shoola* (~acid-peptic disorders, gastric ulcer, acute gastritis, cholilithiasis), *Bhagandhara* (~acute fissure and fistula) were ruled out before administration of *Virechana* procedure as *Teekshana virechana* has been advised.

Exclusion of case reports

Incomplete case report formats, where complete details of *Virechana vegas* and type of *Shuddhi* have not been mentioned and case reports of patients who discontinued *Virechana* procedure because of aversion to *Snehapana*, were excluded from the study.

Duration of study

All the case reports of the patients collected were in the span of 18 months (December 2012–April 2014).

Procurement of *Danti avaleha*

Danti avaleha administered for the patients during this period was procured from GMP certified KLE Ayurveda Pharmacy, Belgaum. The medicine used for all the patients was prepared in a single batch with shelf life of 24 months.

Statistical methods like simple average and percentage analysis were used in this study.

Assessment of *Shuddhi*

Shuddhi is defined as the effect resulted in the patient due to the expulsion of *doshas* (morbid factors) by administration of *Panchakarma* procedures. The following two parameters are primarily considered to assess the type of *Shuddhi*.

Vegiki/grading of Shuddhi

Shuddhi attained by *Virechana* is graded into three types depending on the number of purgative bouts after the omission of first two bouts passed initially. Passage of bouts ranging from 1 to 10, 11 to 20, and 21 to 30 is graded as *avara* (least), *madhyama* (medium), and *Pravara* (excellent) type of *Shuddhi*.

Kapha Aantiki shuddhi

Aantiki shuddhi means type of *Dosha* expelled during end of *Virechana vegas* (purgative bouts). Here, *Kapha dosha* is expected to be *Aantiki shuddhi* which is prime sign for deciding the *Samyak yoga* of *Virechana* (perfect purgation), apart from the number of bouts.

As per the case reports, all 27 patients were administered initially with *Deepana* (carminatives) and *Pachana* (digestives) with *Chitrkadivati* till *Nirama lakshanas* were observed. Later, *Snehapana* (internal oleation) was administered with *Moorchita griha* (processed ghee) till the attainment of *Samyak snigdha lakshanas* (proper signs of unctuousness). During the next 3 days of *Vishrama kala*, *Sarvanga abhyanga* (external oleation) with *Moorchita tila taila* (processed sesame oil) followed by *Bashpa sveda* (sudation) were administered. Finally, all the patients were administered *Virechana* with *Danti avaleha* in the dose of 5 g and 10 g for *Madhyama* and *Krura koshtha*, respectively. In the patients where *Ayoga lakshanas* (improper purgation) were observed, *Danti avaleha* was re-administered at the dose of 5 g after assessing their *Jeerna aushadhi lakshanas* (signs of digestion of previous dose of medicine).

Observations

Case reports presented that the patients were diagnosed with irregular menstrual cycles, polycystic ovarian syndrome (11), primary and secondary infertility (6), and psoriasis (10).

None of the case reports suggested past history of diabetes in the patients. Study revealed that patients who were fit for *Teekshana* (severe) *Virechana* were only administered *Virechana* with *Danti avaleha*. The age of the patients in the reports was found to be in the range of 20–40 years.

RESULTS OF THE STUDY

Among 27 patients, seven of them possess *Krura koshta*, and twenty possess *Madhyama koshta*. *Krura koshta* patients attained *Snigdghata* (unctuousness) in 6 days with average dose of 215 ml, whereas *Madhyama koshta* group attained *Snigdghata* in span of 4 days with average dose of 180 ml. Signs of unctuousness were observed in all patients [Table 1].

Among *Krura koshta*, three patients had *Pravara shuddhi* whereas four patients had *Madhyama shuddhi* with minimum of 15 and maximum of 24 bouts. Among *Madhyama koshta* patients, four had *Madhyama shuddhi* whereas 16 had *Avara shuddhi* with minimum of 6 and maximum of 14 bouts. *Kaphantika lakshana* was observed in all patients irrespective of *Koshta* [Table 2].

Udarashoola and *Vamana* were the complications observed in the patients on the day of *Virechana*. *Udarashoola* has been experienced by three *Krura koshta* and seventeen *Madhyama koshta* patients. *Vamana* was observed in four *Krura koshta* and sixteen *Madhyama koshta* patients.

Four *Krura koshta* patients who encountered *vamana* complication were of *Kaphapitta prakriti* and had *Madhyama shuddhi*. While other three did not have *vamana* and attained *Pravara shuddhi*.

In *Madhyama koshta*, sixteen patients had *Vamana* of which four attained *Madhyama shuddhi* and 12 attained *Avara shuddhi*. While other four attained *Avara shuddhi* only, without the complication of *Vamana* [Table 3].

Punah oushadi prayoga (re-administration of medicine) was observed in all *Madhyama koshta* patients [Table 3].

This study also observed that the patients had undergone *Virechana* in different months and presented with different types of *Shuddhi* which was not season-dependent. The above data depict that the three types of *Shuddhi* are present in all the seasons which does not vary much.

DISCUSSION

Danti is one among best six purgative drugs mentioned in our classics. *Danti* possesses the qualities like *Teekshana* (sharp), *Ushna* (hot), *Guiru* (heavy), *Aashukari* (faster in action),

Table 1: Signs of unctuousness in respect to koshta

| Type of sign of unctuousness | Krura koshta (n=7) | Madhyama Koshta (n=20) |
|--|--------------------|------------------------|
| Vatanulomana (normal movement of vata) | 7 | 20 |
| Agni deepthi (increased digestive fire) | 7 | 20 |
| Twak Snigdghata and Gatra snigdghata (unctuousness of skin and body) | 5 | 18 |
| Purisha snigdghata (steatorrhea) | 7 | 20 |
| Snehodvega (aversion to sneha) | 6 | 18 |
| Klama/Glani (un-exertional tiredness) | 7 | 20 |
| Angalaghavata (lightness of body) | 3 | 4 |

Table 2: Shuddhi in respect to koshta

| Shuddhi | Krura koshta (n=7) | | Madhyama koshta (n=20) | |
|------------------|--------------------|--------------------|------------------------|--------------------|
| | Number of bouts | Number of patients | Number of bouts | Number of patients |
| Pravara (>20) | 22 | 03 | 00 | 00 |
| Madhyama (11-20) | 16 | 04 | 13 | 04 |
| Avara (1-10) | 00 | 00 | 8 | 16 |

All the 27 patients had *Kaphaanta*

Table 3: Shuddhi versus Vamana complications

| Status/occurrence of complication | Outcome/bouts of Virechana (number of patients) | |
|-----------------------------------|---|--|
| | Krura koshta (7) | Madhyama koshta (20) |
| Absence of Vamana upadrava | 3 - Pravara shuddhi | 4 - Avara shuddhi |
| Presence of Vamana upadrava | 4 - Madhyama shuddhi | 4 - Madhyama shuddhi 12 - Avara shuddhi |

Vamana complication observed in general after first Vega of *Virechana*. In all *Madhyama koshta* patients, *punah virechana aushada* was administered at the dose of 5 g when *ayoga* was observed. Number of patients in parenthesis

Vikasi (relieves obstruction). This is more beneficial in reducing pitta and *Kapha doshas*.^[9] *Virechana* with *Danti* is mainly indicated in *Gulma* (growth), *Udara* (ascites), *Granthi* (cysts), *Aavrta vata* (complex pathological conditions of Vata), *Aartava dhushti* (menstrual disorders), *kushta* (skin disorders)^[10] and in the conditions where *Teekshana virechana*^[11] (strong purgation) is advised. This drug can be administered as a purgative in all seasons.^[12] In spite of many indications, still this drug is used as only an ingredient in many formulations like *Kaishora guggulu*, *chandraprabha vati* etc., rather than as a purgative drug. This may be due to the above complications like *Udara shoola* and *Vamana*. Intolerance of the drug was experienced by the patients when administered for purgation and even there is difficulty in the fixation of dose also. Hence, this retrospective study was performed to understand the common dose of *Danti avaleha* administered and the presentation of bouts.

This study shows that the duration of *Snehapana* and quantity of *Sneha* consumed with respect to the *Koshta* are almost similar to earlier studies on *Samyak snigdha lakshanas*.^[13] The earlier studies also presented the duration

of *Snehapana* in the same range of 6–7 days for *Krura koshta* patients and 4–5 days in *Madhyama koshta* patients. In this study, the percentage of patients those attained *Samyak snigdha lakshanas* like *Shakhaagata* (oleation of peripheral tissues/ exterior tissues)/ *Twacha snigdha* (unctuousness of skin), *Koshthagata* (oleation at Gastrointestinal tract [GIT])/ *Purisha snigdha* (slimy stools with fat), and *Snehodvega* (aversion to *Sneha*) with respect to *koshta* were in parity with previous studies [Table 1].^[13]

The age of the patients in the case reports was in the range of 20–40 years where the dose of medicine remains standard. Hence, the dose of *Danti avaleha* administered in these patients was not age-dependent but based on type of *Koshta*.

Pravara shuddhi was observed only in *Krura koshta* patients, whereas *Madhyama shuddhi* was noticed in both *Krura* and *Madhyama koshta* patients. *Avara shuddhi* was seen only in patients of *Madhyama koshta*. The purgative bouts observed in *Krura koshta* were in the range of 15–24, whereas the bouts in the *Madhyama koshta* ranged between 6 and 14. *Samyak virikta lakshana* of *Kaphaanta* was attained irrespective to the number of bouts, which might be due to *Teekshana* (penetrant) and *bhedana* (purgative) *gunas* of *Danti*.

Pravara type of *shuddhi* was observed in those *Krura koshta* patients where complete medicine was retained due to the absence of *Vamana*. That might have caused more number of *Vegas* resulting in *Pravara shuddhi*. The other set of *Krura koshta* patients who attained *Madhyama shuddhi* may be ranging from *Madhyama* to *Krurata*. Hence, they might have vomited due to intolerance of drug and thus produced less number of *Vegas* resulting in *Madhyama* type of *Shuddhi*.

Further analysis has shown that *Udara shoola* (spasmodic abdomen) was experienced by twenty patients among whom three patients belong to *Krura koshta* and remaining seventeen belongs to *Madhyama koshta*. Onset of *Udara shoola* was observed within 10 min of administration of drug in all twenty patients, and fifteen of them were relieved from pain soon after *Vamana*. In general, *Udara shoola* is expected with abnormal dosage, excessive higher dose, improper purification (*Shodhana*) of the medicine and in conditions like administration of *Teekshana dravya* in *mridu koshta* (high potent medicine in mild *Koshta*).^[14] The conditions affecting GIT like acid-peptic disorders, ulcer, acute fissure and fistula etc., were also evaluated. Even in the absence of all the above factors, the occurrence of abdomen pain in patients may be attributed to *Teekshana guna* of *Danti*.

Even in the absence of causative factors of *Vamana* like administration of purgation during *Kapha kala* (kapha predominance time), *Kapha* associated conditions and low intensity of *agni*,^[14] the condition “*Vamana*” was

still be observed. This again might be due to *Teekshana guna* of *Dravya* leading to spasmodic pain in abdominal muscles with contractions and expulsion of *Dravya* through oral route. Another important point to be noted is that the *Vamana* happened in all the patients after their first purgative bout, clearly indicating that emesis was not due to patient’s aversion for medicine.

Relation between *Shuddhi* and the complication *Vamana* in *Krura Koshta*: Here, the *Koshta* is predominant of *Vata* and *Kapha dosha*.^[15] The patients (3) who did not vomit the drug can be understood as possessing the inherent quality of *Krura tama* (excess *krura*/strong) in their *Koshta* where *vata* is predominant. Hence, they were able to tolerate *Teekshana dravya* and had maximum average number of *Vegas* (22.4). The other four patients might be of *Krura tara* (moderate strong) with *Kapha* predominant *Koshta* and hence vomiting was observed. But still they were able to exert average bouts of sixteen without requiring re-administration of the second dose.

Re-administration of medicine in *Madhyama koshta*

Madhyama and *Avara shuddhi* were observed in all *Madhyama koshta* patients. Among *Madhyama koshta*, 80% of them presented with the complication of *Vamana* and remaining 20% did not have *Vamana*. *Avara vegas* were observed in all patients irrespective of *Vamana* complication. The second dose of 5 g medicine was administered only after ascertaining the digestion of previous dose. Even after re-administration of medicine, there was no much improvement in the number of bouts.

The dependence of season on the number of bouts or type of *Vegiki shuddhi* (end point) is evaluated. It is clearly evident from the data that the three types of *Shuddhi* were seen in all the seasons. This indicates that *Vegiki shuddhi* is not related to season and dependent only on the effect of drug.

Further the age of patients was not related to the type of *Shuddhi* attained. From the observation, it is found that all patients who had undergone *Virechana* were in the age range of 20–40 years where the dose of drug remains same as per classics. Hence, the type of *Shuddhi* is more dependent on the quantum of *Doshas* (morbid factors), rather than age of the patient and their dose.

Danti (*Baliospermum montanum*) is attributed for possessing the property of hydragogue cathartic.^[16] This means it produces a discharge of watery fluid belonging to the class of cathartics that retains fluids in the intestines and aid in the removal of only edematous fluids which can be correlated to *bhedana*/*rechana* type of *Virechana*. Hence, this might have induced the purgation even at mild doses. The difference in the number of bouts may be due to the individual response to the phytochemicals such as

baliospermin and montanin,^[17,18] present in *Danti moola*, which might be responsible for purgation.

Danti is a least practiced drug for purgation because of the complications like intolerance of the drug, spasmodic abdomen and emesis of the medicine. In spite of these complications, still *Kaphaantaki* was observed in all the patients of either *koshta* which is the *Samyak virikta lakshana*.

CONCLUSION

This study presents the evidence that administration of *Danti dravya* at dose of 10 g is well-tolerated by patients possessing *Krura koshta*. *Pravara shuddhi* may be attained at dose of 10 g in *Krura koshta*. *Madhyama koshta* patients were intolerable with dose of 5 g and even after repetition of dose, they resulted only with *Madhyama* and *Avara shuddhi*.

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Conflicts of interest

There are no conflicts of interest.

GLOSSARY

- *Abhyanga* = External Oleation by application of oil in a specific direction (along with direction of hair root).
- *Avara Shuddhi* = Least type of *Shuddhi*.
- *Ayoga Lakshanas* = Improper/Inadequate purgation.
- *Bashpa Sweda* = Method of Sudation.
- *Bhedana* = Type of *virechana* which has lytic (breaks the morbid factors) action.
- *Deepana* = Carminatives.
- *Koshta* = ~Gastro intestinal tract (GIT).
- *Krura koshta* = Strong type of nature of GIT which has ability to digest anything.
- *Madhyama Koshta* = Moderate type of GIT.
- *Madhyama Shuddhi* = Medium *Shuddhi*.
- *Pachana* = Digestives.
- *Pravara Shuddhi* = Excellent *Shuddhi*.
- *Rechana* = Synonym of *Virechana*.
- *Samyak Virikta Lakshanas* = Signs of perfect purgation.
- *Shuddhi* = Purification/detoxification.
- *Snehapana* = Internal Oleation by oral route of administration of *sneha*.
- *Teekshana* = Severe/penetrant nature of drug.
- *Udarashoola* = Spasmodic pain in the abdomen.
- *Upadrava* = Complications.
- *Vamana* = Emesis/vomiting.
- *Vegas* = Purgative bouts.
- *Virechaka Dravya* = Drug that imparts purgative action.
- *Virechaka Dravyas* = Drugs used for Therapeutic purgation.
- *Virechakopaga* = Drugs that only assist purgation.
- *Virechana* = Therapeutic Purgation.

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