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Original Article

CLINICAL STUDY ON EFFECT OF VIRECHANA KARMA (THERAPEUTIC PURGATION)

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ABSTRACT

The study has been carried out for the comparative analysis of relevant literature in order to highlight the present topic "Clinical study on effect on *Virechana karma* (therapeutic purgation)". Total no. of 40 cases has been selected from OPD and IPD of *Panchakarma* department, through proper history taking and clinical examination prior to *Virechana Karma*. Only *Virechana Karma Yogya* subjects were selected for the *Virechana Karma*. Analysis of *Virechan Karma* on the basis of *Vegiki* (purgative bouts), *Maniki* (quantity), *Langiki* (clinical features) and *Aantiki* (end product) features were done in this study. In this study a highly significant relief was found in patients i.e. $p<0.001$ due to *Virechana* mainly vitiated *Pitta Dosha* (the heat energy in the body) and secondary *Kapha dosha* (mucus) and *Vata Dosha* (subtle energy associated with movement) are being expelled out which might have accounted for better relief in *Virechan Yogya* (indicated) individuals (Pitta Pradhan *Vyadhi* (vitiated *pitta*), *Raktaj Roga* (hemopoietic diseases), *Shodhan Yogya Avastha* (detoxification), etc.) in the above group of patients. *Virechana Dravyas* have properties like *Tikshna* (hyperfunction), *Sukshma*(subtle), *Ushna* (heat), etc. are described in *Ayurvedic* classics which play a vital role in the mode of action of *Virechana Karma* has also been explained under probable mode of action.

Keywords *Virechana, Panchakarma, Pitta dosha, Kapha dosha, Vata dosha.*

INTRODUCTION

Ayurveda is science of life and longevity. It isn't just highlighting on prevention of diseases but in addition also encourages the maintenance of wellbeing through close consideration of balance in one's life by right thinking, diet and way of living. It empowers one to see how to create this balance of body, mind and consciousness according to one's own constitution. The dependable factor behind any action, procedure or execution is called as *Karma* (*Charaka Samhita*, *Sutra sthan*, 1/54).

Charaka has considered *Vamana* (emesis) and *Virechana* (purgation) also as *Karma*. According to *Chakrapani*, *Brimhana* (nourishment) etc. should also be considered as *Karma*. *Dosha* (fundamental factors), *Dhatu* (fundamental elements), *Malas* (waste product of body) and *Srotas* (minute channels) and etc. are helpful in the assessment of *Aushadha Karma* (action of drug) on the basis of their effects on *Sharira* (body) (Charaka Samhita, Sutra sthan, 1/49). The aim of *Ayurveda* is to maintain health of a healthy person and treat the diseased one. The first aim can be fulfilled by the diet and life style such as *Ritucharya* (seasonal regimen), *Dincharya* (daily regimen), *Abhayanga* (massage), *Dhupana* (fumigation), *Nasya* (Erhines), etc. Above all comes under the category of *Karma*. The second aim can be fulfilled by diet, many drugs and procedures which are described by ancient *Ayurvedic* sages like *Vamana*, *Virechan*, *Basti*, *Nasya*, *Snehana*, *Swedana*, etc. All these are part of *Chikitsa* (treatment) and goes under the heading of Karma (*Charaka Samhita*, *Sutra sthan*, 30/26).

Panchakarma (bio-purificatory methods) is a science for purification of the body. Since the vitiation of *Doshas* beyond a particular level produces *Doshavaishamya* (defect in fundamental factor) which will in general accumulate in the *Srotasa* (minute channels) of the body which are to be evacuated for maintaining equilibrium either at the state of health or disease. *Panchakarma* treats the sickness as well as keeps up all strength of the body in great and excellent way. Capacity of clearing, predominance and adequacy of the procedures focus on of *Dosha* eradication and large number of activities are characteristics of *Panchakarma* procedures. *Panchakarma* therapy is a systematize *Samshodhana* Therapy under which all methodology of purification incorporated. The *Panchakarma* therapy is classified as following:

■ *Purva Karma* (pre-procedure) - It includes the following:

1. *Deepana* (augments metabolism)

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2. *Pachana* (pacification of undigested product of metabolism)
3. *Snehana* (oleation)
4. *Swedana* (sudation)

■ *Pradhana Karma* (Main therapy) - The *Pradhana Karmas* are as give below:

1. *Vamana Karma* (Therapeutic emesis)
2. *Virechana Karma* (Therapeutic purgation)
3. *Anuvasana Basti* (Therapeutic oil based enema)
4. *Asthapana Basti* (Therapeutic decoction based enema)
5. *Nasya Karma* / *Shiro Virechana* (Erhines)

■ *Pashchat Karma* (post therapy) - It includes the procedures like *Samsarjana Krama* (specific diet post bowel cleansing), specially planned.

Virechana

The procedure in which, the elimination of vitiated *Doshas* is expelled through the lower part *i.e* anal route is known as *Virechana* (*Charaka Samhita, kalpa sthan*, 1/4). "*Adhobhaga*" signifies "*Guda*" remarked by *Chakrapani* (*Charaka Samhita, Kalpa sthan*, 1/4-*Chakrapani*). *Virechana* is a restorative medicated purgative remedy that is intended for expelling out vitiated *Dosha* and *Mala* through the anal route. *Virechana* Karma is explicit for the elimination of vitiated *Pitta Dosha* as well as for *Kapha Dosha* (*Charaka Samhita*, *Sutra sthana*, 25/40). *Pitta* is firmly related with Agni, which is responsible for the digestive and metabolic processes in the body.

Indications of *virechana* are in *Jwara* (fever), *Pandu* (anaemia), *Vatarakta* (gout), *amavata* (rheumatoid arthritis), *Shwasa* (respiratory disease), *Kasa* (cough), *Shotha* (inflammation), *Kushtha* (leprosy), *Vyanga* (melisma) and etc. (*Ashtang hridaya, sutra sthana*).

The present study was planned with the objectives to collect, explore and interpret the subject matter on *Virechana Karma* from various sources. The entire study has been done in terms of *Samsodhana* (cleansing) therapy mainly *Virechana Karma*. Therefore, the study is based on practical approach of *Virechana karma* in various samples.

MATERIAL AND METHOD

Virechana Karma is a process in which waste products i.e. vitiated *Doshas* are eliminated through the lower channels i.e. through the anus. According to *Ashtanga Sangrah, Virechana Karma* is not merely a therapy for *Pittaja* disorders but for the *Kapha*, too (*Ashtanga Sangrah, Sutra sthan*, 27/4). The natural external route to expel out such *Doshas* is anal route, so in such conditions *Virechana* is indicated. According to *Acharya Charaka, Karma* is action in the form of curative efforts. It is the combination and separation which takes place at a time or simultaneously (*Charaka Samhita, Sutra sthan*, 1/52). Hence, present study was undertaken. Prior approval of Institutional human Ethical Committee (No. ECR/BHU/693/Inst/UP/2013/ Re-registration 2017 Dt. 31.1.2017) of Banaras Hindu University was obtained before commencing clinical study.

Selection of Patients: Total no. of 40 cases have been selected from OPD and IPD of *Panchakarma* department, S.S.H., I.M.S., B.H.U., Varanasi through proper history taking and clinical examination prior to *Virechana Karma*. Only *Virechana Karma Yogya* subjects were selected for the *Virechana Karma*.

Inclusion criteria:

- *Virechana Yogya* individuals, as per *Ayurvedic* literatures. (*Pitta Pradhan Vyadhi*, *Raktaj Roga, Shodhan Yogya Avasthaa* and etc.) (*Charaka Samhita, Sidhi sthan*, 2/13)
- Age group - 16 to 60 years.
- Patients, who had given their consent to undergo treatment.

Exclusion criteria:

- *Virechana Ayogya* individual, as per *Ayurvedic* literatures. (*Sama Avastha* (severe phase), *Aashukari Roga* (fast acting), *Adhamarga Vegit Roga* (anal urge), etc.) (*Charaka Samhita, Sidhi sthan*, 2/11)
- Age group – Below 16 year and above 60 years.
- The patients who were not willing to be included in the study.

Follow up study: Single follow up was taken in 15 to 21 days.

Grouping: Single group study.

Procedure of *Virechana Karma*

A) *Purva karma*

i. *Deepana* and *pachana* - Patients were admitted in hospital after selecting them with inclusion criteria, for further procedure. Routine examination i.e. Temperature, Blood pressure, Pulse were daily assessed along with routine systemic examination. Before the *Snehana Karma* of this group, *Agni* (metabolic fire) and *Kostha* (Gastrointestinal tract) assessment were done in every patient (*Charaka Samhita*, *Sutra sthan*, 13/67). In all the patients, to regulate the *Agni*, *Deepana* and *Pachana* (The patients were first given *Chitrakadi Vati* 2bd and *Lavanabhaskar Churna* in the dose of 3 grams twice a day for 3 days for the purpose of *Deepana* and *Pachana*) medicine was given (*Ashtang Hridaya, sutra sthan*, 13/28).

ii. *Snehapana*: For *Snehapana* medicated *Ghrita* (melted butter) or *Gau Ghritta* was administered after *Deepana* and *Pachana* at 7.00 am with lukewarm water as *Anupana* (post prandial drink). The initial dose of *Ghrita* was started with 30 ml (test dose) on the first day (*Ashtang Hridya*, *Sutra sthan*, 16/17). Dose of *Ghrita* was gradually increased by 30 ml (means for first day 30ml, for second day 60 ml for third day 90 ml and so on). *Snehapana* was administered for 3, 5 or 7 days as per the criteria of *Samyaka Snigdha Lakshana* (symptoms of adequate oleation) (*Charaka Samhita*, *Sutra sthan*, 13/65) Patient was advised to avoid excessive wind, direct sunlight, emotional aggravation, exercise, heavy work, excessive talking, laughing, standing and journey during this period. The patient was advised not to take any type of diet till he gets the strong sensation of *Kshudha* (appetite). Patient was advised to have lukewarm water till appetite is appeared (*Charka Samhita*, *Sutra sthan*, 13/22; *Ashtang hridya*, *Sutra sthan*, 16/20).

iii. *Abhyanga* and *Swedana*: After *Samyaka Snigdha Lakshana, Ghrita* was stopped and patients were administered with *Abhyanga* and *Swedana* for 3 days (*Charaka Samhita, Sutrasthan*, 13/18). *Abhyanga* was done with lukewarm *Taila* (oil) (any medicated oil or coconut oil or sesame oil) was applied to the whole body. Patient was transferred to *Vaspa Sweda* room after *Abhyanga* and was given *Vaspa Sweda* (stream sudation) for 15-20 minutes.

iv. Diet in the evening of gap day (Before *Virechana*): One day

before at night, prior to *Virechana* therapy, he/she had given the diet consisting of the *Snighdha* (unctuousness), *Drava* (fluidity), *Ushna* (heat), *Masa Rasa* (meat soup), and *Bhat* (rice). The diet should have *Kapha* alleviating properties which will result in satisfying *Virechana*. Therefore, *Laghu Aahar* (light diet) and lukewarm water should be given (*Charaka Samhita, Siddhi sthan*, 1/8; *Sushruta Samhita, Chikitsa sthan*, 33/20).

B) *Pradhana Karma (Virechana Karma)*
Administration of *Virechaka Yoga* (Dose): According to *Acharya Sushruta*, the *Virechaka Dravya* Dose depends upon *Vyadhi* (disease), *Agni* and *Purush Bala* (strength). (*Sushruta Sutrasthan* 39/10). *Acharya Vagabhatta* suggests not to fix parameter for dose determination, the following factors need consideration: *Vyadhi Bala* (Severity of disease), *Kostha* (GIT), *Vaya* (Age), *Desha* (Climate), *Kala* (weather/season) (*Sushruta Samhita, Chikista sthan*). *Acharya Charaka* describes the following as the effects of an ideal dose of *Virechanaka Dravya* are maximum elimination of *Doshas* with minimum Dose, occurrence of spontaneous *Virechana*, *Virechana* leading to alleviation of the disease, Absence of complications (*Charaka Samhita, Sutrasthan*, 15/7).

C) *Paschata Karma* (*Samsarjana Krama*)
By analyzing the procedure, conclusion regarding the grade of purification was deduced. It was evaluated whether the purification was *Uttama* (excellent), *Madhyama* (medium) or *Hina* (least), and accordingly the *Samsarjana Krama* was planned (*Charaka Samhita, Siddhisthan*, 1/11). For the respective three types (Grades) of the purification, the regimen of 3, 5 and 7 days were opted for the patients. In case of *Hina*, *Madhyama* or *Uttama* purification *Peya-Vilepi-Mudga Yusha* (rice water) and Rice with *Mudga Yusha* (Gram soup) were served for one meal time, two meals time and three meals time respectively, starting from the evening of the *Virechana* day.

■ Assessment Criteria (*Charaka Samhita, Siddhisthan*, 1/14 - Chakrapani)

1. *Vegiki* - It depends upon the numbers of *Virechana*. So the *Vega* which comes with much force to expel the stool may be termed as *Vega* as *Doshas* are accumulating in the *Pakvashaya* (rectum).
2. *Maniki* - *Maniki* criteria seems impractical as nowadays it is very difficult to assess in different condition.
3. *Antiki* - It depends upon the end product which should be *Kapha* (mucus). This is the most important criteria and is very carefully observed throughout the process: *Virechana* process continuously goes on expelling the *Doshas* with the stool. Firstly *Mutra* (urine) pass out, followed by *Mala* (faeces). Then *Pitta Dosha* appears to expel out. After that, *Kapha Dosha* expelled out (*Charaka Samhita, siddhi sthan*, 1/17). Lastly at the end *Vata Dosha* is expelled. The changes taking place in the expulsion of vitiated matter were monitored. If *Virechana* ends by *Kapha* expulsion, it is considered as *Samyaka Virechana* (proper). If it is only Pitta expulsion, it is *Asamyaka Virechana*.
4. *Laingiki* - It depends upon the signs and symptoms which appear after *Virechana Karma*. *Laingiki* criteria is based on the symptoms of *Samyaka Virechana*.

Measurement of *Aantiki, Vagiki, Maniki*, and *Laingiki* are the features of *Samyaka Virechana Karma* (proper therapeutic purgation therapy) (Table 1). So, the patient has been assessed by *Samyakayoga, Atiyoga* and *Ayoga Lakshana*. *Maniki* criteria seem impractical as nowadays it is very difficult to assess in different condition**.**

Table 1. Measurement of *Aantiki, Vagiki, Maniki,* and *Laingiki*

	Avara	***Madhya***	***Pravara***
Aantiki	*Kapha-anta* (whtitsh fecal matter with mucus)	*Kapha-anta*	*Kapha-anta*
Vegiki	10 times	20 times	30 times
Maniki	2*Prastha*	3*Prastha*	4*Prastha*
Laingiki	*Samyaka Yoga*	*Samyaka Yoga*	*Samyaka Yoga*

Samyakayoga Lakshana: (adequate) (*Charaka Samhita, Siddhi sthan*, 1/17)

- *Srotoshuddhi* (detoxification of minute channels)
- *Laghuta* (lightness)
- *Vatanulomana* (downward movement of *vata*)
- *Urjas* (enthusiasm)
- *Indriya-prasadan* (improve sensory and motor function)
- *Rugprasadan* (subside diseases)
- *Agnivirdhi* (increase metabolic fire)
- *Vitta-pitta-kaphanilamprapti* (sequential expulsion of faeces)

Ayoga Lakshana: (inadequate) (*Charaka Samhita, Siddhi sthan*, 1/18)

- *Kaphaprakopa* (vitiation of *kapha*)
- *Vaataprakopa* (vitiation of *vata*)
- *Gaurava* (heaviness)
- *Chardi* (vomiting)
- *Vittasanga* (constipation)
- *Aruchi* (anorexia)
- *Pittaprakopa* (vitiation of *pitta*)
- *Agnimaandhya* (decrease in metabolism)
- *Tandra* (drowsiness)
- *Vatapratilomatva* (abnormal movement of *vata*)
- *Pratishya* (coryza)

Atiyoga Lakshana: (excessive) (*Charaka Samhita, Siddhi sthan*, 1/19)

- *Kaphachayajvikara* (disease of reduced *kapha*)
- *Vatachayajvikaara* (disease of reduced *vata*)
- *Pittachayajvikaara* (disease of reduced *pitta*)
- *Angamarda* (bodyache)
- *Vepathu* (tremor)
- *Tamahpravesh* (blackout)
- *Supti* (numbness)
- *Raktachayajvikar* (disease of reduced *Rakta*)
- *Klama*(tiredness)

- *Nindranasha* (insomnia)
- *Unmaad* (insanity)
- *Hikka* (hiccups)

Apathya (contraindicated): Oil, spices, curd, pickle, meat, fish, eggs and cold eatables.

STATISTICAL SIGNIFICANCE

Chi square test has been calculated to test the significance of difference between two categorical variables. Whereas the expected frequency will come less than five, the chi square test has been calculated by pooling the rows or columns.

Chi-square ($\chi 2$) test calculations is done on SPSS Tool developed by IBM (Version – 26 released on 09 April 2019).

- $p<0.05$ is considered statistically significant.
- $p<0.01$or $p<0.001$ as statistically highly significant.
- $p>0.05$as not statistically significant.

OBSERVATION & RESULT

Clinical profile of patient

Virechana Karma

Table 2. Showing mean time for *Virechana* and *Vega Kala*

Mean Time Required For *Virechana* Yoga to Act	2.15 hours
Mean Total *Vega Kala* From First To Last *Vega*	6.20 hours

The present study revealed that the mean time required for onset of *Virechana Vegas* after administration of mentioned *Virechana Yoga* to act was 2.15 hours and the mean time taken for total *Virechana* process from first *Vega* to last *Vega* was 6.20 hours.

***Vaigiki Shuddhi* wise distribution of 40 Patients**

Table 3. Showing *Vaigiki Shuddhi in patients*

Type of *Shuddhi*	No. of *Vega*	No. of Pts.	Percentage	Statistical Value
Avara	Up to 10	4	10	χ^2=18.66 **P**=0.000
Madhyama	> 10 – 20	24	60	
Pravara	> 20 – 30	8	20	

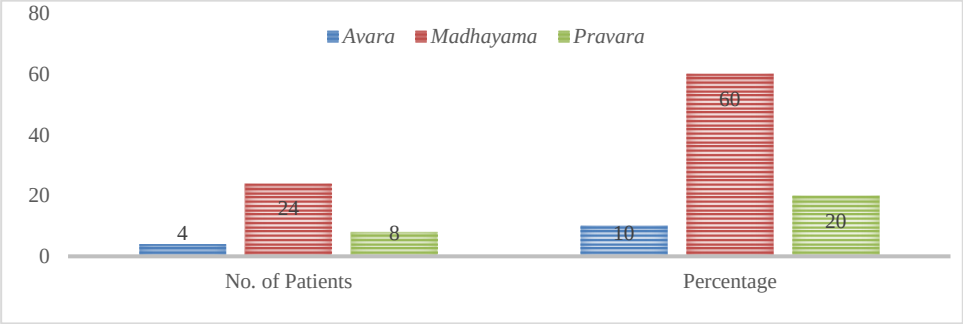

Fig.1 Bar diagram shows *Vaigiki Shuddhi* in patients

Maximum no. of patients i.e. 24 (60%) patients showed *Madhyama Shuddhi*. Average patients showed *Pravar Shuddhi* i.e. 8 patients (20%) and minimum patients showed *Avara Shuddhi* i.e. 4 patients (10%).

Distribution of 40 patients according to *Antiki Shuddhi*

Table 4. Showing *Antiki Shuddhi in patients*

Symptoms	No. of Patients	Percent	Statistical Value
Kaphanta	26	65	χ^2=7.11 P=0.007
Drava Malanta	10	25	

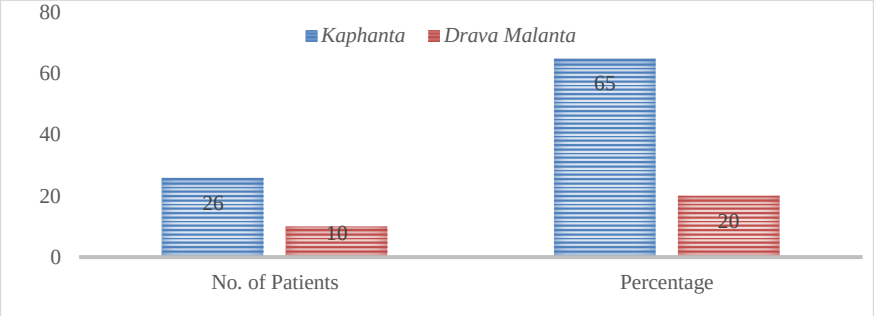

Fig.2 Bar diagram shows *Antiki Shuddhi* in patients

Distribution of patients as per *Laingiki Shuddhi* achieved after *Virechana*

Table 5. Showing *Laingiki Shuddhi in patients*

Laksana	Patient	Statistical Value
Samyakayoga	36 (90%)	χ^2= 61.07 **P**= 0.000
Ayoga	2(5%)	
Atiyoga	1 (2.5%)	

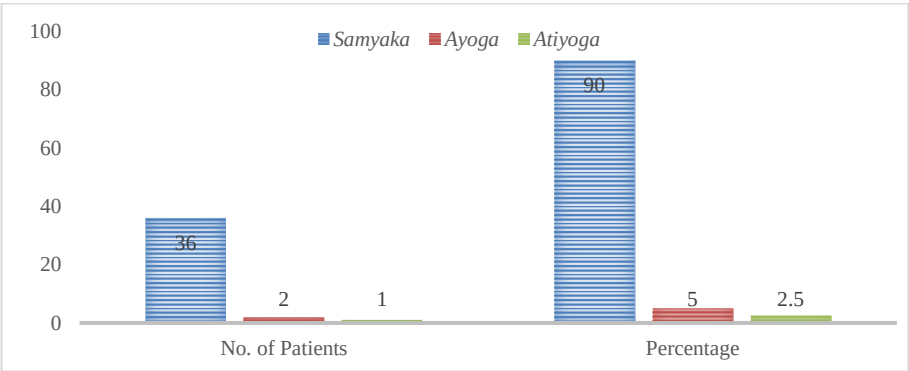

Fig.3 Bar diagram shows *Laingiki Shuddhi* in patients

Maximum patients showed *Samyaka Lakshana* (features of proper clearance) i.e. 36 patients (90%) and 2 patients (5%) showed A*yoga Lakshana* and only 1 patient (2.5%) showed *Atiyoga Lakashana*.

***Samsarjana Krama* wise distribution of Patients**

Table 6. Showing *Samsarjana Krama in patients*

Type of *Samsarjana Krama*	No. of days	No. of Pts.	Percentage	Statistical Value
Avara	3	3	7.5	χ^2= 32.16 **P** = 0.000
Madhyama	5	28	70	
Pradhana	7	5	12.5	

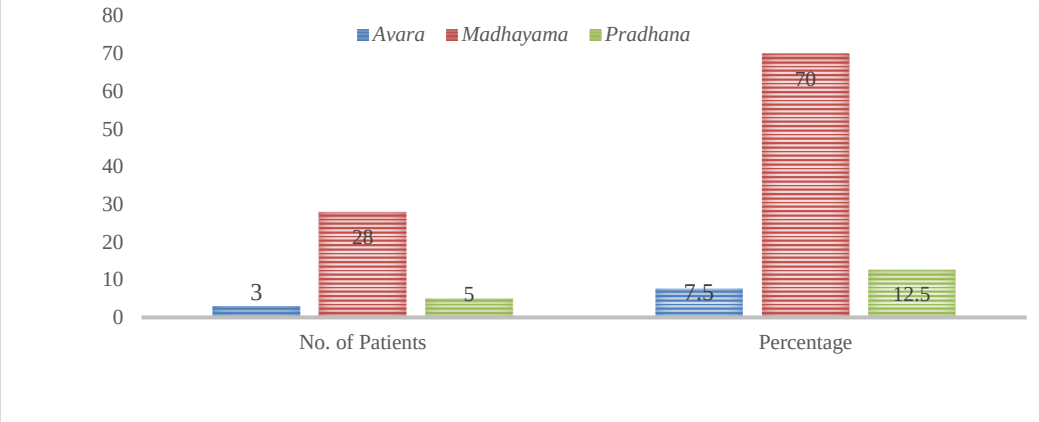

Fig.3 Bar diagram shows *Samsarjana Krama* in patients

Maximum no. of patients i.e. 28 (70%) patients showed *Madhyama Samsarjana Krama*. Average patients showed *Pradhana Samsarjana Krama* i.e. 5 patients (12.5%) and minimum patients showed *Avara Samsarjana Krama* i.e. 3 patients (7.5%).

Samyakayoga Suddhi Lakshana

Table 7. Showing *Samyakayoga Suddhi Lakshana in patients*

Lakshana	Patient	*Lakshana*	Patient
Srotoshuddhi	19	*Indriya-prasadan*	21
Laghuta	36	*Rugprasadan*	11
Vatanulomana	36	*Agnivirdhi*	32
Urjas	14	*Vitta-Pitta-Kaphanilamprapti*	36

In this study, *Vata–Pitta-Kapha Nihasarana*,*Vatanulomana* and *Laghuta* were observed in 36 patients (90%). *Agni Vriddhi* was observed in 32 patients (80%). *Indriya Prasadan* was reported by 21 patients (52.5%). *Sroto Shuddhi* was observed in 19 patients (47.5%). *Urjas* was observed in 14 patients (35%). *Rugprasadan* was observed in 11 patients (27.5%).

Ayoga

Vegiki - The first patient had no *Vega* of *Virechana* and the Second patient had only one *Vega* of *Virechana*.

Lengiki -

Table 8. Showing *Ayoga Lakshana in patients*

Kaphaprakopa	0	*Pittaprakopa*	1
Vaataprakopa	2	*Agnimaandhya*	1
Gaurava	2	*Tandra*	1
Chardi	2	*Vatapratilomatva*	2
Vittasanga	2	*Pratishyay*	0
Aruchi	1		

Atiyoga

Vegiki - Patient having 37 *Vega* of *Virechana*

Lengiki –

Table 9. Showing *Atiyoga Lakshana in patients*

Kaphachayajvikar	0	*Pittachayajvikaara*	0
Vatachayajvikaara	1	*Raktachayajvikar*	0
Angamarda	1	*Klama*	1
Vepathu	0	*Nindranasha*	1
Balaabhava	0	*Unmaad*	0
Tamahpravesh	1	*Hikka*	0
Supti	1		

STATISTICAL SIGNIFICANCE

- Statistically highly significant difference (P<0.000) was obtained on *Vaigiki Shuddhi* because Maximum no. of patients i.e. 24(60%) patients showed *Madhyama Shuddhi*.
- Statistically highly significant difference (P<0.007) was obtained on *Antiki Shuddhi* since Maximum patients showed *Kaphanta Virechana* i.e. 26 (65%) patients which is the essential criteria for *Samayaka Virechana*.
- Statistically highly significant difference (P<0.000) was obtained on *Laingiki Shuddhi* as maximum patients showed *Samyaka Lakshana* i.e. 36 (90%) patients.
- Statistically highly significant difference (P<0.000) was obtained on *Samsarjana Krama* because maximum no. of patients i.e. 28 (70%) patients showed *Madhyama Samsarjana Krama*.

RESULT AND DISCUSSION

Reason of *Samayaka Virechana Karma:*
Samyaka Virechana Karma depends on *Chikitsa Chatushpada.* These *Chatushpada* includes *Bhishag, Rogi, Dravya* and *Upasthata* (*Charaka Samhita, Sutrasthan*, 9/33).

- ***Bhishag* (physician*) –*** The physician should choose the *Yogya* patient and explain the full procedure of *Virechana Karma*, assessment of *Purva, Pradhahan* and *Pashchat Karma* should be done. In case of adverse effect of the therapy, the management should be done properly. The physician should be *Yuktigya*/knower of the *Yukti*.
- ***Rogi* (patient) –** Counselling of patient, patient should follow the procedure of the therapy, the patient should know Do and don't, and should be in contact with doctor.
- ***Aushadhi (*medication*)* -** Standard medicine should be used. In case of adverse effect, the medicines for it should bept already.
- ***Upasthata (*nurse/ attender) –** The attainder should motivate the patient for taking the therapy. Attendants should help the patient to follow do and don't. The Attendants should prepare meals of *Samsarjan Karma* for patient after the therapy and follow the instruction before and after the therapy.

These four components of treatment, when they are having requisite and specific qualities helps in proper *Virechana Karma* in particular but if in any condition these components are not having appropriate qualities, then it will cause improper *Virechana Karma* which may cause complication too.

Effect of therapy:
The results obtained in above group of patients of *Virechana*, on each parameter are being discussed here as under;

Samyaka Suddhi Lakshana
Vata–Pitta-Kapha Nihasarana, Vatanulomana and *Laghuta* was observed in 36 patients (90%). *Agnivriddhi* was observed in 32 patients (80%). *Indriya Prasadana* was reported by 21 patients (52.5%). *Srotoshuddhi* was observed in 19 patients (47.5%). *Urjas* was observed in 14 patients (35%). *Rugprasadan* was observed in 11 patients (27.5%).

i. ***Srotoshuddhi (cleansing of minute channels) –*** When *Vikrita Pitta, Kapha, Mala, etc.* which are causing *Marga Avarodha* are expelled out through *Virechana* hence, *Vyadhi Shamana* occurs.
ii. ***Indriyaprasadana* -** *Gyanendriya* and *Karemendriya Prasannata* (lightness in senses) occurs. *Dalhana* has told that *Kaya Mana Prasadata* occurs from this *Manasuddhi*.
iii. ***Agnipradipta* (increase in metabolism*) -*** After *Samyaka Virechana Agni* will be little bit increased as all the *Doshas* and fluid contents are eliminated, hence the person feels *Kshudha* (hunger) and *Trushna* (thirst).
iv. ***Laghutavama* (lightness in body*) -*** After *Samayaka Virechana* person feels *Laghutuvam* because *Vikrita Dosha, Dushya* and *Ama* etc. are eliminated. And for every 500 ml of fluid elimination, one pound of weight will be decreased. Hence person feels lightness in the body.
v. ***Urjasa (*enthusiasm) -** After *Samyaka Virechana Karma*, the person feel enthusiasm in his/her body because of above mentioned *Samyaka Suddhi Lakshana*.
vi. ***Rugprasadana (*disease alleviation*) -*** The symptoms of disease alleviation is appeared for which the *Virechana* therapy was administrated.

Reason of *Ayoga Lakshana* - 2 patients showed *Ayoga Lakshana* because one of them had taken more quantity of water with *Virechana Aushadi* despite of explaining the quantity to the patient which leads to vomiting of entire *Virechana* medicine and causes no *Virechana.* And for in the other patient the *Koshtha* analysis was not done properly and the patient had taken small quantity of *Virechana Aushadi* which causes less *Vega Pravruti* during *Virechana*.

Reason of *Atiyoga Lakshana* - Only one patient showed *Atiyoga Lakshana* because the patient had taken more

quantity of *Virechana Aushadhi* even though the dose was told properly and explain by the physician himself which leads to more *Vega Pravruti* during *Virechana.* To stop the *Vegas Sthambhan Aushadi (Kutajghan Vati)* had given to the patient, and for electrolytes balance lukewarm water with electrode powder is given from time to time. Intake of meal was stopped for a while and patient was under proper supervision for 2 days.

Reason of Dropout - Only one patient had not completed the therapy because during *Snehapana* the patient was not tolerating the *Abhyantara Snehana* (*Ghrita Pana*) and left the therapy.

Probable mode of action of *Virechana* therapy (Charaka. Kalpasthan 1/5 – Chakrapani)
The properties of *Virechana Dravyas* are *Ushna, Tikshna, Sukshma, Vyavayi, Vikasi* etc. are mentioned in *Ayurvedic* classics which play a vital role in the mode of action of *Virechana Karma*.

1) ***Ushna*** - *Ushna Guna* has *Agneya* property and hence "*Vishyandana*" occurs i.e. '*Vilininam Kurvanti' (Chakrapani*). Hence it facilitates movement of morbid *Doshas* towards *Kostha*. It also assists to *Tikshana* property to perform its action.
2) ***Tikshana*** - *Tikshna* property of *Virechana Dravya* performs the function of "*Sanghatabhedana*", '*Chakrapani'* quoted the word '*Vicchindayanti'* (*Ch. Ka. 1/5 - Chakrapani*). It means to break the complex morbid matter into smaller molecules. According to *Dalhana*, it is responsible for quick excretion. Thus, *Tikshna* property breaks the *Mala* and morbid *Dosha* in micro form leading to expulsion.
3) ***Sukshma*** - *Sukshma Guna* due to its *Anupravanabhava*, i.e. "*Anutvat Pravanabhavach (Ch. Ka. 1/5 – Chakrapani)* its helps to dilate the channel and to pass the drug into micro-channel. This property helps to remove the morbid matter from micro-channels and brings them to *Kostha* leading to expulsion.
4) ***Vyavayi (*spreading*)*** - Due to this, drugs spreads quickly throughout the body and starts their action before its digestion. Due to *Vyavayi Guna, Virechaka* drugs spreads all over the body without changing their form. Some scholars included this property under '*Drava'* property.
5) ***Vikasi (*opening channels*)*** - Due to this property drugs loosens the *Dhatu Bandhana (Sharangadhar Purvakhand 4*). It creates the *Dhatu Shaithilyata (Dalhana*). Hence drugs initiates their action without being digested. From all these properties *Doshas* are driven to *Kostha*.

Now on the basis of above description of *Virechana Dravya's* properties it can be conclude that due to their *Vyavayi, Vikasi, Sukshma Guna, Virechana* drugs reaches to the micro channels and by virtue of its *Ushna, Tikshna Guna* it scrapes out and liquefies morbid *Mala* and compact *Doshas*. In this way, *Virechana* Drugs brings *Shakhagat Mala (impurities in limbs)* to *Koshtha (GIT)* and consequently expels out form the body.

Virechaka drugs carry out the *Virechana* due to the *Prabhava* or *Achintya Virya* of drug rather than its above properties. No doubt these properties help to do so but drug should have that *Prabhava*. The drugs which are having *Jala (water)* and *Pruthvi (earth) Mahabhutas* dominancy have a natural tendency to go downwards and thus they can assist in induction of Virechana. If drugs are having all above said properties but if it is not having *Virechaka Prabhava* then it will not induce the *Virechana Karma*. Hence we can say, that drugs act by its active principle can be said as *Virya* (potency) or *Prabhava* not by *Guna* (property), but properties assist in carrying the function of drug.

Previous Researches done on *Virechana karma* are

1. Paradkar Hemant et al. has done observational study on 48 years old male patient to show effect of *Virechana* in Psoriasis (Paradkar Hemant *et al.*, 2014).
2. S. Sangeeta Sharma et al. presented a case study over 19 years old male patient to show effect of *Virechana Karma* in the treatment of Psoriasis (S. Sangeeta Sharma *et al.*, 2013).
3. Prachi dalvi conducted a study at jamnagar, in 2002 and concluded that *Virechana* removes the *Kapha* along with *Pitta*. (Prachi dalvi, 2002).
4. *Virechana* showed significant relief in signs and symptoms of bronchial asthma. In a study conducted on 24 patients the breath holding capacity and peak expiratory flow rate improved, when compared with pacifying therapy. (KA Ghosh *et al.*, 2012).
5. In a case report on rheumatoid arthritis, *virechana* showed significant reduction in RA factor to 50 IU/ml from earlier level of 94 IU/ml. *Virechana* followed by avoidance of allergens reduced the CRP level from 22.7mg/l to 1.8 mh/l. After 3 months of follow up the IgE levels reduced from 680kU/l to 53.7 kU/l. The 40% relief in pain and stiffness of joints were reported soon after the virechana (Gupta SK *et al.*, 2015).

CONCLUSION

40 patients for *Virechana* were registered in this out of which total 39 patients completed therapy. In this study during assessment of *Virechana Karma* maximum no. of patients lying under following criteria. In *Vegiki, Madhyama Shuddhi* was observed mainly in 24 patients. In *Antiki, Kaphanta* was observed mostly in 26 patients and lastly in *Laingiki, Samyaka Lakshana* was observed in 36 patients. In this study a highly significant relief was found in patients i.e. $p<0.001$.Due to *Virechana* mainly Vitiated *Pitta Dosha* and secondary *Kapha dosha* and *Vata Dosha* are being expelled out which might have accounted for better relief in *Virechan Yogya* individuals (*Pitta Pradhan Vyadhi, Raktaj Roga, Shodhan Yogya Avastha,* etc.) in the above group of patients.
Panchakarma is the ultimate tool for better maintenance of health, prevention and curing of diseases. Judicious and appropriate application of *Panchakarma* could be the right way for our practitioners. It is upto the practitioner to choose the right method of *Shodhana* after assessing the disease as well as the patient. *Virechana* in particular can be used as a regular treatment modality for OPD and IPD patients. Many of the acute conditions can be treated by using *virechana karma* as a therapeutic procedure.

Scope for Further Research
The present study shows that *Virechana* can be indicated for *Virechana Yogya* individuals. The present study was carried

on small sample size for a limited period of time and it showed encouraging results. However, to be more confirmative regarding standardization of proper *Virechana karma* further study should be conducted on large sample size for longer duration.

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CONFLICT OF INTEREST

The authors have no conflicting financial interests.

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