



To Study The Efficacy Of Virechana By Aragvadha Kwatha In Pittaja Kushtha

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Abstract: Subjects suffering from Pittaja Kushtha (Skin diseases having symptoms- redness, pimples, discharge, burning sensation, itching) aged between 30-60 years, irrespective of sex, cast, religion, socioeconomic strata was studied. For each subject the study terminated after a maximum period of 21 days from enrollment and included regular visits to Hospital for Poorvakarma (Internal & external Snehana, Swedana), Pradhan Karma (Virechana) & 1 follow up visit after 7 days of Virechana. After consenting to participate subjects were put on 15 days wash-out period for Allopathic medicine & 7 days for Ayurveda medicines; & before being administered the investigational product. On baseline visit (Day 1), medical history and physical examination were performed, an Inclusion criterion was assessed and the trial treatment, i.e. Virechana by Aragvadha Kwatha was explained & subject started for Poorva-Karma (Internal & external Snehana, Swedana). After optimum signs of Internal & external Snehana, Swedana achieved then on next day morning about 8 A.M. empty stomach Aragvadha Kwatha (prepared as described in SOP) was administered orally & subject was observed through out the Pradhan Karma for Ayoga, Samyaka Yoga, Atiyoga or Vyapada. After completing of Pradhan Karma subject was advised for post Panchakarma behavior regimen & Samsarjana Krama (diet regimen). On Day 21, subject was again accessed for the same symptoms.

Safety was assessed primarily through incidence of adverse events (AE) & clinical evaluation of the subject.

Observations: It is observed that in the study treatment, i.e. Virechana by Aragvadha Kwatha in Pittaja Kushta; P-value <0.05, hence considered as significant.

Discussion: Comparative data analysis revealed that the 'p' value in all the symptoms (redness, pimples, discharge, burning sensation & itching) was highly significant. From the data of the objective features, the 'p' values were almost highly significant (P < 0.001) in all the parameters. Hence, it can be concluded that the Virechana by Aragvadhadi Kwatha is more effective in Pittaja Kushtha. The results are encouraging and support the classical claim that Aragvadha is effective in reducing the symptoms of Pittaja Kushtha and can be used extensively in the treatment.

Probable mode of action of the Aragvadha in Pittaja Kushtha: All types of Kushtha are Tridoshaja, hence one should treat the patient according to dominance of vitiated Dosha. Symptomatically the vitiated Dosha which is more dominant that should be treated first (Ch. Chi. 7/29, 30). As per these guidelines of Charak, instead of going in details of 18 types of skin disease, this study is about Pittaja Kushtha. Charaka has recommended Shodhana in Pittaja Kushtha & has given more emphasis on Virechana Karma to balance the vitiated Pitta Dosha. Much number of drugs is described for Virechana Karma in classical texts. Out of these, for the present study Aragvadha (*Cassia fistula* Linn) was selected. Charaka has considered it as the best Virechana Dravya. Aragvadha is Madhura, Tikta Rasa; Guru, Mridu, Snigdha Guna; Sheeta Virya and Madhura Vipaka. Hence, the drug is useful in Pitta vitiation. In Ashtanga Hridaya, Aragvadha is described in the Kaphaghna Gana and in Sushruta Samhita, Aragvadha has been described as the Adhobhagadosahara Dravya. As per Charaka Samhita, Aragvadha is the best Mriduvirecana drug. Therefore, it helps in Kapha Nirharana along with Vatanulomana. Thus, the drug helps in Dosha-Dushya Vighatana in the disease Pittja Kushtha.

Conclusion: Acharya Charak has explained very precisely about Shodhana & Shamana treatments of Kushtha with the formulations useful for it. He had given more emphasis on examining the Dosha Pradhanata instead of going details with types of Kushtha which is practical approach. Though it has been observed that Sushruta has described contamination is one of the Hetu (reasons) for Kushtha. About types some differences are finding in their categorization as Mahakushtha & Kshudrakushtha in between Charak & other Samhitas. According to dominance of vitiated Dosha, types are explained by Charak & as well as they are mentioned precisely in Madhav Nidan also. The quotation given by Vagbhata & Chakradatta is to be considered while treating skin diseases which advise to do Virechana every month in this disease.

On the basis of the results of this study it may be concluded that, analysis of the data of the present study reveals significant Kusthaghna activity of Aragvadha in subjects with Pittaja Kushtha (skin problems due to vitiated Pitta Dosha). As there was no complication, we can conclude that Aragvadha is safe drug of choice for Virechana in Pittaja Kushtha.

Key words: Aragvadha, Pittaja Kushtha, Virechana, Ayurveda

Introduction:

It has been reported from various studies in the general population and primary care that around 15-20% of people are suffering from various skin diseases. In those days intake of food & drink made up of incompatible ingredients, as also food & drink that are liquid, oily & heavy are very common things. Suppressing the natural urges, indulging in physical exercises and exposing themselves to the extreme heat after having overloaded the stomach with food & drink, sleep regularly in day, sexual activities after intake of food - are not rare things. Using cold & hot edibles successively, indulging in fasting & goring, taking diet with violating the proper

sequence, afflicted with excessive perspiration, or toil, or terror, quickly indulge in cold water – are also habitual things. Eating food during indigestion and when previously food is not digested, use of contraindicated items like cakes, raw sugar, milk, and use of rice that is new, curd, fish, salt and things that are sour are very common. These causes vitiate Tridoshas. They affect Twak, Rakta, Mamsa, Ambu (watery substance that lies in skin) of Sharir. These are pathogenic materials of skin disorders. Due to which 18 types of skin disorders appear according to Chark Samhita. These are Kapala, Audumbara, Mandala, Rushyajivha, Pundarika, Sidhma, Kakanaka, Ekakushtha, Charma, Kitibha, Vipadika, Alasaka, Dadru, Charmadala, Pama, Visphotaka, Shataru & Vicharchika.

Symptoms of Pittaja Kushtha according to dominance of vitiated Dosha Charak & Madhavakara are: severe burning sensation, redness, discharge, visphotaka (pimples), itching. Out of these 18 types Audumbara, Rushyajivha, Pundarik from Sapta Mahakushtha & Pama, Shataru, Visphota, Dadru, Charmadala are due to vitiated dominance of Pitta and Pittanubandha – are having very common occurrence. All these 8 types show common symptoms such as redness, burning sensation, pain, itching and pimples.

Considering all these quotations, commonly occurring symptoms like redness, pimples, discharge, burning sensation & itching are included for study.

In case of Pittapradhan Kushtha, the Virechana is recommended as the first choice of Upakrama by Acharya Charak. It means to expel out the vitiated Doshas through Adhobhaga i.e. by anal passage. By this route the Doshas can be eliminated by Niruhs Basti can not be included under Virechana Karma. Virechana expels out the Amashayadi Doshas dragging them towards the Adhobhaga through Guda.

Acharya Charak has described Kushtha as the second indication for Virechana. It may be pointed out that Vamana is stressful process but Virechana is a comparatively easy procedure for both Vaidya & patient.

Aragvadha (Cassia Fistula, Linn.) is described as Phalini Virechana Drug (Ch. Su.1/81-85), Virechana Dravya Sangrah (Ch. Vimana. 8/140) in Charak Samhita. He has described Aragvadha for external application in Kushtha, Specially the name of that chapter as ‘Aragvadhiya’ itself indicates the efficacy of Aragvadha as Kushthaghna (Ch. Sootra. 3).

Aragvadha is mild, sweet, cold and is particularly beneficial for those suffering from fever, heart disease, Vatarakta, Udavarta etc. Aragvadha is particularly used in children, old, wounded, wasted and delicate persons. Precisely, we can say that it is safe for all (Ch. Kalpa. 8/4-5).

Along with these qualities Bhavprakasha had mentioned its Kushthaghna property. And Dhanavantari Nighantu, Madhav Nidan, Nighantu Ratnakar, Kaiyadev Nighantu also recommends Aragvadha as Virechana herb. Hence I decided to work on this topic (Bhavaprakasha Haritakyadi Varga).

Hence I have decided to study this topic as a Research Protocol.

Materials & Methods:

Study objectives -

Primary Objective – To evaluate the efficacy of of Aragvadha Kwatha in Pittaja Kushta.

Secondary Objectives –

- To study the references of Virechana, Aragvadha & Pittaja Kushtha from Chark Samhita.
- To study the references of Virechana, Aragvadha & Pittaja Kushtha from other Samhitas, Nighantus, etc.
- To evaluate the safety of Aragvadha Kwatha by enlisting the Vyapada (complications) caused by it.

Plan of work -

The present Research work is conducted in two parts:

Part I – Compilation of literature & reviews

Virechana:

Ayurveda emphasizes preventive & curative therapies along with various methods of Purification (Panchakarma). Virechana therapy is useful for vitiated Pitta & Kapha. Virechana Karma is medicated induction of purgation by ingestion of herbal medicine.

In this method vitiated Doshas is expelled out of the body by mean of increase peristaltic movements of intestine. For maximum benefit, it must be practiced only after Poorva karma has been administered. The drugs used for Virechana Karma (purgation therapy) vitiate the Doshas and bring them into the Koshta (abdomen). From there, they are expelled through anal route. Purgative drugs are dominant in Pruthvi (earth) and Aapa (water) Mahabhoota and have downward movement. The synonyms of Virechana are Rechana and Praskandhana.

According to Acharya Charak, after Completion Snehapana (internal administration of Cow Ghee), Sarvanga Swedana is given. Then on the previous day of Virechana patient is advised to take easily digestible food. On the day of Virechana, the patient is restricted from any food till the main procedure ends. The medicine for Virechana is administered on empty stomach in the morning.

The main herbs used for Virechana Karma are: Danti (*Baliospermum montanum*), Trivrita (*Operculina turpenthum*), Aragvadha (*Cassia fistula*), Haritaki (*Terminalia chebula*), Sonamukhi (*Cassia lanceolata*), etc. The different parts of herbal drugs are used for Virechana Karma. According to Maharshi Charak 245 formulations can be formed by these.

Types of Virechana –

B. Depending upon the degree of Shodhana achieved by the Virechana Karma it is categorized into Mridu, Madhyama and Teekshna.

1. Minimal amount of Shodhana when achieved is known as Mridu Virechana.
2. Moderate amount of Shodhana when achieved is known as Madhyama Virechana.
3. Teekshna Virechana refers to maximal amount of Shodhana.

B. In another perspective the Virechana karma is also classified into four as

Anuloma, Sramsana, Bhedana, Virechana.

2. Anulomana-This refers to the process of evacuation; in which the medicines administered causes disintegration of the mass of the fecal matter accumulated in the gastrointestinal tract as well as renders its formed (Pakva) state. E.g. Haritaki.
3. Sramsana- Evacuation of the waste from the gastrointestinal tract without transforming it in to (Pakva) state is called by the name Sramsana. E.g. Aragvadha.
4. Bhedana- The oral medication that cause disintegration of hard fecal matter accumulated in the gastrointestinal tract and then expel the same is known as Bhedana. E.g. Katurhini.
5. Virechana is categorized into two types as Snigdha Virechana and Ruksha Virechana.
 - Snigdha Virechana – The procedure of administering the Virechana Karma following Aabhyantara Snehapana is termed as ‘Snigdha Virechana’. Aabhyantara Snehapana is done for the mobilization of morbid ↓ into gastrointestinal tract and then expelled out by way of Virechana Karma. In another perspective, the drugs possessing Snigdha property like Eranda (*Ricinus communis*) taila when used for inducing purgation is also known as Snigdha Virechana.
 - Ruksha Virechana – The employment of Virechana Karma with no or minimal prior preparation of the client with Aabhyantara Snehana is called by the name ‘Ruksha Virechana’. In certain diseases like

Visarpa (acute bacterial infections of the dermis), Shotha (edema), Kamala (jaundice) etc where Snehana is contraindicated, Ruksha Virechana is advised.

Charaka describes following Virechana drugs –

- Mulini drugs- Hastidanta, Shyama Trivrit, Danti, Saptala, Indrayana, etc.
- Phalini drugs- Sankhini, Madhuyasti, Karanja,abhaya, Kampillaka, Aragvadha etc.
- Lavana – Saindhava, Souwarchala.
- Kshira Virechana- Snuhi, Arka
- Pakwashaya Virechana- Trivrita, Triphala, Danti, Neelini, Draksha, Aragvadha, etc.
- Bhedaniya drugs- Trivrita, Arka, Eranda, Swarnakshiri, Chitraka etc.
- Virechanopaga- Draksha, Gambhari, Phalsa, Abhaya, Amalaka, Bibhitaka, Badara etc.
- Purisha Virajniya- Jambu, Twaka, Madhuyashti, Tila, etc.

Sushruta describes the following drugs with priority for Virechana –

- Among roots (Mula irechana)- Shyam Trivrit
- Among barks (Twak irechana)- Tilwaka
- Among fruits (Phala irechana)- Haritaki
- Among oils (Tails Virechana)- Eranda
- Among juices (swarasa irechana)- Karvellaka
- Among milks (paya irechana)- Sudha (snuhi)

The general indications for Virechana are: Pitta ↓ increased disorders, Skin diseases, chronic fever, Hemorrhoids, Gulma, Spleenmegaly, Heptomegaly, Jaundice, Worms, Erysipelas, Gout, etc.

The contraindications for Virechana are: Low digestive power, acute fever, diarrhea, severe constipation, bleeding from rectum or lung cavities, following Basti, weakness, prolapsed rectum, alcoholism, dehydration, childhood, old age, ulcerative colitis, distended abdomen, injury in the gastrointestinal tract, traumatic injury, etc.

Procedure of Virechana Karma –

Preparation of patient initially with Snehana and Swedana for certain period followed by oral medication for purgation. After the purgation the patient is then subjected to ‘Samsarjana Karma’ as follow up procedure.

Examination of Patient –

Before planning the Virechana Karma the patient is thoroughly investigated to ascertain the indication of Virechana Karma as well as to exclude any factor of contraindication. Virechana is planned in physically strong persons in whom this Shodhana therapy is indicated.

Snehapana –

After ascertaining proper functioning of gastrointestinal tract the client is subjected to Abhyantara Snehpana. The Sneha for this procedure is selected according to the illness. Depending upon the appearance of desired effect of Snehpana it is carried out for about 7 days.

Bahya Snehana & Bashpa Sweda – Following Abhyantara Snehpana, Bahya Snehana & Bashpa Sweda are carried out. Sesame oil for Bahya Snehana & Dashmoola decoction for Swedana for 3 days. After these procedures the patient will be subjected to Virechana.

Selection of drug & doses for Virechana –

While selecting the herbal combination and its dosage for the Virechana Karma many of the related matters have to be considered so that the response to the therapy is neither poor nor excessive. If the patient is physically weak, small dose of purgative is desirable. Also in the patients who are subjected to other Shodhana procedures the small dose of mild purgative is preferred. When the accumulation of ↓ is less, it is ideal to

administer mild purgatives in small dosage. Determination of Koshta is mandatory before fixing the dosage purgatives. If for any reason the Koshta of the client could not be assessed then to be on the safer side it is better to prescribe the mild purgatives, than too in small dose. When the amount of ↓ vitiation is large in a physically strong patient it is ideal to prescribe large dose of strong purgatives that can be conveniently changed to achieve deferent degrees of Virechana effect.

Observation of the patient –

- Within hours after administration of the purgative the client starts passing the watery stools. During the process of Virechana initially the stools is expelled out followed by Pitta and at the end of Kapha dosha. This is known as Kaphanta Virechana. If the urge for purgation continues patient passes only the flatus and is indicative of excessive response to the Virechana therapy and is not desirable. Thus assessing the effect of the therapy the doctor should enquire about the character of the stool passed, presence of mucus in the stools as well as passing the flatus.
- To prevent vomiting sprinkle cold water on the face immediately after administering the purgative drug. Then wash the mouth with hot water and ask the patient to smell fragrant substances.
- Afterwards give little quantity of hot water at regular intervals to support the procedure.
- Either forceful expulsion or stopping urges are contraindicated.
- Vata, Mutra, Purisha, Pitta and Kapha will be expelled in a sequence.
- To induce bouts consume hot water and do gentle massage with palms on the abdomen.
- If the purgation drug is being digested without doing its function, second dose can be given on the same day. Never administer second dose without knowing the position of the drug, which may cause severe complications.

Counting the spells of purgative –

- For the assessment of response to Virechana karma, it is essential to measure the amount of fluid excreted as well as the spell of purgation.
- While measuring the amount of fluids excreted, the initial volume of stools excreted is disregarded.
- Only the fluid with little or no stools is measured during the assessment of the response to Virechana.
- Similarly the initial spells of passing the liquid stools should not be taken into account while determining the number of spells of excretion.

Assessment of response –

- If the degree of evacuation of morbid ↓ is large then is known as Pravarsa Shuddhi.
- Moderate amount of ↓ by Virechana Karma is called as Madhyama Shuddhi.
- Further the small amount of elimination of ↓ by Virechana is referred by the name Avara Shuddhi.
- These grades of purification by way of Virechana Karma are assessed on the basis of amount of fluid excreted. Different ↓ that are seen in the excreta by the end of Virechana, number of spells of purgation and the symptoms developed in the patient due to the effect of the therapy.
- The assessment made on the basis of the amount of fluid excreted during the process of Virechana is known as Maniki Pariksha.
- If the assessment made on the basis of dosha excreted at the end of the procedure then is known as Antiki Pariksha.
- If the assessment made according to the number of spells of defecation, then it is known as Vaigiki Pariksha.
- The assessment can also be done on the basis of the symptoms developed in the patient and is known as Laingiki Pariksha.

Laingiki Pariksha –

Weakness and the lightness of the body these symptoms suggest the elimination of the ↓ from the body. These are the four criteria of determining the grades of Shodhana. All these criteria are considered together and well balanced before deciding the overall effect of Virechana as well as degrees of Shodhana achieved.

Ayoga Lakshana (Symptoms indicative of inadequate response of Virechana) –

- Apravritti – Absent purgation
- Vitsanga – Small amount of fluid excretion
- Vidgraha – Obstructed urges for defecation
- Alpapravritti – Excretion stools in little amount

Ayoga results in:

- Kapha prakopa
- Pitta prakopa
- Vata prakopa
- Agnimandya
- Gaurava
- Pratishyaya
- Tandra
- Chardi
- Pidaka
- Aruchi
- Vatapratilomata
- Daha
- Hridya vishuddhi
- Kukshi ashuddhi
- Vitsanga
- Mutrasanga

Samkyoga Lakshana (Symptoms indicative of proper effect of Virechana) –

- Srotovishuddhi – Clarity of the body channels
- Indriya prasada – Clarity of the sense organs
- Laghuta – feeling of lightness in the body
- Rog-upshamana – Remission of the illness
- Vatanulomana – Normal course of Vata ↓
- Agnivridhhi – Increase in the ability of digestion
- Urjas – Enthusiasm
- Vitpittakaphanilanam – Sequential excretion of stools, Pitta, Kpha & Vata.

Atiyoga Lakshana (Symptoms indicative of excessive response to Virechana) –

- Kapha-pitta-vata kshya – Deplion of Kapha, Pitta & Vata ↓
- Supti – Numbness
- Angamarda – Body ache
- Klama – Tireness
- Vepana – Tremors
- Nidra – Sleepiness
- Daurbalya – Debility
- Tama – Darkness in front of eyes
- Hikka – Hiccough
- Unmada – Mania

- Murchha – Transient loss of consciousness
- Shula – Abdominal pain
- Gudabhamsha – Prolapse of rectum
- Malavaivarnya – Variegated color of stools as reddish without mucous or Pitta
- Trit – Thirst
- Netra praveshnam – In drawing of eyeballs

Paschat Karma (Follow up procedure) –

B. Samsarjana Karma –

Following Snehapana till the day of Virechana the patient is given foods that are oily, warm, and probably liquid. Meat soup, rice and sour fruits may be given. On the day of Virechana no food is allowed prior to the administration of purgatives.

Immediately after the Virechana Karma, as the digestive power is very weak only liquid food is advisable. Due to which digestion power shows a gradual increase the food is slowly changed to solid or to regular food.

- Supper on day of Virechana - Only liquid portion of the gruel (peya)
- Lunch on 1st day after Virechana – Only liquid portion of the gruel (peya)
- Supper on 1st day of Virechana - Only liquid portion of the gruel (peya)
- Lunch on 2nd day after Virechana- Gruel with little solid portion (vilepi) added with small amount of salt and ghee
- Supper on 2nd day of Virechana- Gruel with little solid portion (vilepi) added with small amount of salt and ghee
- Lunch on 3rd day after Virechana- Gruel with little solid portion (vilepi) added with small amount of salt and ghee
- Supper on 3rd day after Virechana- Rice (prepared from 160 gms of rice) with green gram soup (yusha), salt and ghee.
- Lunch on 4th day after Virechana – Rice (prepared from 160 gms of rice) with green gram soup (yusha), salt and ghee.
- Supper on 4th day after Virechana- Rice (prepared from 160 gms of rice) with green gram soup (yusha), salt and ghee.
- Lunch on final 7th day after Virechana – Meat soup (rasa) with salt
- Supper on final 7th day after Virechana – Meat soup (rasa) with salt
- Lunch on 7th day after Virechana - Meat soup (rasa) with salt
- Supper on 7th day after Virechana - Usual diet from here onwards.

B. Tarpanadi Karma-

Samsarjan Karma is usually indicated after Virechana. This normalizes the digestive function. In certain conditions where the predominance of Kapha ↓ is observed instead of Samsarjan Karma the tarpanadi Karma is advised. Since Samsarjan Karma tends to aggravate the accumulation of Kapha ↓ this change in diet is essential. Tarpanadi Karma refers to the use of Lajasaktu (flour of the fried rice), rice or meat soup as food. Following are the conditions where Tarpanadi Karma is advised.

- Kaphapitta avashuddhe alpam – In patients who have shown inadequate response to Virechana
- Madyape – In patients addicted to alcohol
- Sleshmanam – Predominant morbidity of Kapha
- Vatapaittikam – Vta-Pitta type of Prakriti

Virechana Vyapada (Complications of Virechana) –

- Adhmana – Distention of abdomen

- Parikarta – Severe cutting pain in the anal region
- Parisrava – Discharge from the anus
- Hridgraha – Precordial discomfort
- Gatragraha – Stiffness of the body parts
- Jivadana – Appearance of the blood in excreta
- Vibhramsa – Altered state of consciousness
- Stambha – Rigidity
- Upadrava – Specific complications
- Klama – Sense of tiredness
- Vamana – The administration of Virechana medicine may induce vomiting in some of the patients.

Among these complications Parikarta, Jivadana and vibhramsha are because of over effect of Virechana karma. Parisrava, Adhmana, Hridgraha, Klama are the result of poor effect of Virechana. Among these complications Ayoga, Atiyoga, Hinadoshapaharana, Savasheshaushadhatva, Jirnaushadhatva are the actual causes of complications.

Aragvadha:

Maharshi Charak has described Aragvadha in Phalini Virechana drug (Ch. Su. 1/81-85), Virechana Dravya Sangraha (Ch. Vi. 8/140). It is also explained as an external application in Kushtha, specially in the name of chapter namely, 'Aragvadhiya'; itself indicates the efficacy of Aravadha as 'Kushthaghna' (Ch. Su. 3).

- Gana: Kushthaghna, Kandughna, Virechana, Tiktakandha, Aragvadhadi, Shymyadi, Adhobhaghara.
- Kula: Shimbi kula (Leguminosae).
- Upakula: Pootikaranja upakula (Caesalpinioideae).
- Family: Caesalpinioideae – after the name of a celebrated Italian botanist.
- Latin name: Cassia fistula, Cassia = kasia (Greek) from a Hebrew word – name of plant; fistula = tube, pipe or reedlike; (Old name = laburnum = Aragvadha).
- English name: Fistula, Laburnum, Purging Fistula, Golden Shower, Drumstick, Purging cassia.
- Sanskrit names: Aragvadha, Arogyshimbi, Svarnat, Karna, Dirghaphala, Rajvriksha (beautiful tree), Shampaka, Chaturangula, Arevat (laxative), Krutaned, Suvarnak (nice colour), Kandughna.

- Chemical Composition –

Pulp – glucose 60%, glutin, pectin, dyes, calcium oxalate, minerals, gum & water.

Active Ingredient: Anthraquinones 1.5% & Fistulic Acid

Chemical Constituents and Components:

Main chemical components are anthraquinones, fistulic acid, rhein, rheinglucoside, sennosides A and B, phlobaphenes, emodin, chrysophanic acid, fistuacacidin, lupeol, beta-sitosterol and hexacosanol.

- Properties:

- Guna – Guru, Snigdha
- Rasa – Madhura, Tikta
- Vipaka – Madhura
- Veerya – Sheeta
- Karma –

Action: Fruit is cathartic (The Indian Materia Medica, with Ayurvedic, Unani & Home remedies).

According Ayurveda texts, it's useful in Skin diseases, Jwara, Hridroga, Raktapitta, Vata, Udavarta, Shoola. Charakacharya has described Aragvadha as 'Anapayitva' means without side effects.

Kushtha:

Hetu (Causative factors) –

According to Acharya Charaka; intake of food & drink made up of incompatible ingredients, as also food & drink that are liquid, oily & heavy are very common things. Suppressing the natural urges, indulging in physical exercises and exposing themselves to the extreme heat after having overloaded the stomach with food & drink, sleep regularly in day, sexual activities after intake of food - are not rare things. Using cold & hot edibles successively, indulging in fasting & goring, taking diet with violating the proper sequence, afflicted with excessive perspiration, or toil, or terror, quickly indulge in cold water – are also habitual things. Eating food during indigestion and when previously food is not digested, use of contraindicated items like cakes, raw sugar, milk, and use of rice that is new, curd, fish, salt and things that are sour are very common. These causes vitiate Tridoshas. They affect Twak, Rakta, Mamsa, Ambu (watery substance that lies in skin) of Sharira. These 7 are pathogenic materials of skin disorders. They are called as ‘Dooshya Sangraha’ in this disease. This is the route cause behind the formation of seven & eleven types of skin diseases.

Poorva-roopa (Premonitory symptoms) –

1. Presence or absence of perspiration
2. Skin becomes either very smooth or rough
3. Loss of usual color or complexion
4. Itching
5. Pricking pain
6. Loss of sensation of touch
7. Burning sensation
8. Horripilation
9. Appearance of elevated patches
10. Giddiness
11. Severe pain or injury
12. Quickly ulcer formation & remains without healing for long period, etc. (Ch. Chi. 7, Ashtang Hridaya Ni. 4)

Bheda (Types) –

A. Ashtadasha Kushtha – The first 7 are called ‘Maha-kushtha’ & the next 11 are called ‘Kshudra-kushtha’.

1. Kapala
2. Audumbara
3. Mandala
4. Rushyajivha
5. Pundarika
6. Sidhma
7. Kakanaka
8. Ekakushtha
9. Charmakhya
10. Kitibha
11. Vipadika
12. Alasaka
13. Dadru
14. Charmadala
15. Pama
16. Visphotaka
17. Shataru
18. Vicharchika

B. Skin diseases are categorized on the basis of predominance of vitiated Dosha as follows:

1. Vataja - Kapala
2. Pittaja - Audumbara
3. Kaphaja - Mandala
4. Vata-Pittaja – Vicharchika & Rushyajivha
5. Pitta-Kaphaja – Dadru, Shataru, Pundarika, Visphotaka, Pama, Charmadala
6. Vata-Kaphaja – Charmakhya, Eka-kushtha, Kitibha, Sidhma, Alasaka, Vipadika
7. Tridoshaja - Kakanaka

Roopa (Symptoms) –

1. Kapala – The skin resembling a brown colored piece of a pot sherd; rough, coarse & thin; painful & intractable.
2. Audumbara – Pain, burning sensation, redness, and itching hairs turned to pink color & nodules developing resembling the fruit of udumbara (*Ficus infectoria*).
3. Mandala – Skin is white or red in color, tight, thickened, smooth with round elevated patches joined to one another.
4. Rushyajivha – Skin is very rough, red in color outside & black inside, painful & resembling the tongue of black deer.
5. Pundarika – Skin white in the centre & red at the edges similar to the petals of the lotus flower with reddish elevated patches.
6. Sidhma – Skin white or coppery red in color, thin, scales coming off on scratching, more common on the chest, resembling the flower of pitcher gourd.
7. Kakanaka - Color of Gunja (*Abrus precatorius*), undergoing pus formation, very painful & caused by all 3 Doshas & which doesn't respond to the treatment.
8. Ekakushtha – Absence of perspiration, large area of skin involved, skin resembling the scales of fish.
9. Charmakhya – The skin becoming thick like that of elephant skin.
10. Kitibha – spots that are dark (black), rough to touch & hard.
11. Vipadika – Hands & feet cracking & forming fissures which are painful.
12. Alasaka – Nodules with itching, & of red color developing.
13. Dadru – Raised patches studded with small, itching, reddish papules.
14. Charmadala – Skin studded with red, painful, itching nodules, which don't allow touching.
15. Pama – Small, plentiful, exuding pustules with itching & burning sensation is 'Pama'. The same as above symptoms of Pama – appearing on the hands & the buttocks with severe pain & itching is called 'Kacchu'.
16. Visphotaka – Boils on the skin, black or blackish red in color & skin becoming thin.
17. Shataru – Innumerable small ulcers which are red or blue in color with severe burning sensation & pain.
18. Vicharchika – Nodules which have itching, black color & copious exudation.

Sadhasadhyatva is also well explained by Charaka. And Maharshi Sushruta has explained 'Aupasargika Rogas' (Infectious/ Contageneous diseases) which is marked by Sushruta & Madhavakara. (Sushruta Nidana 5, Madhava Nidana 49).

Chikitsa (Treatment) –

- Vataja Kushtha – Drinking of Ghee
- Pittaja Kushtha – Virechana (Purgative therapy) first & then Raktamokshana
- Kaphaja Kushtha – Vamana (Emetic therapy)

Part II - Clinical Trial

Phase of study: Therapeutic exploratory

Study Design: Case series study

A) Materials –

a. Inclusion criteria –

Subjects satisfying all of the following inclusion criteria were to be included in the study:

1. Subjects suffering from Skin diseases having symptoms- redness, pimples, discharge, burning sensation, itching.
2. Subjects aged between 30-60 years, irrespective of sex, cast, religion, socioeconomic strata.
3. Subject provides written informed consent and comes for regular follow up.

b. Exclusion criteria –

Subjects meeting any of the following exclusion criteria were to be excluded from the study:

1. The subjects which are contraindicated for Virechana such as weakness, acute fever, low digestive power, dehydration, childhood, anal injury, rectal prolapse, anal prolapse, ulcerative colitis, hemorrhoids, alcoholism, operated emaciating, chest disease, pregnant, postpartum period.
2. Subjects suffering from serious diseases like cancer, tuberculosis, diabetes, a history of stroke, myocardial infarction, coronary artery disease, cardiac failure, angina, life-threatening arrhythmia.
3. Below the age of 30 years and above 60 years.
4. Subjects with major psychiatric disorders.
5. Subject not ready to sign the consent & unable to comply with the protocol.

c. Withdrawal Criteria -

Subjects meeting any of the following criteria were to be withdrawn from the study:

1. Earnest request of the subject assigning a reason for the same.
2. Serious adverse events where continuation of study possess serious risk to the subject.
3. Subject consumes any other medicines used for the treatment of skin disease.

d. Sample size- Number of patients planned: 50 completed cases.

e. Safety - Monitoring of adverse events & Clinical examination.

f. Study Centre for Research Study –

Ashtang Ayurved College & Hospital, 2062, Sadashiv Peth, Late Vd. H. B. Paranjape Chouk, Pune – 411 030

B) Methodology –

Identity of the Investigational Product –

Authenticity of I.P. was analyzed at Indian Drugs Research Association & Laboratory, Shivjinagar, Pune – 411 005.

50 subjects between 30-60 years of age were recruited. Subjects suffering from Skin diseases having symptoms- redness, pimples, discharge, burning sensation, itching was eligible for the study. For each subject the study terminated after a maximum period of 21 days from enrollment and included regular visits to Hospital for Poorvakarma (Internal & external Snehana, Swedana), Pradhan Karma (Virechana) & 1 follow up visit after 7 days of Virechana.

After consenting to participate subjects were put on 15 days wash-out period for Allopathic medicine & 7 days for Ayurveda medicines; & before being administered the investigational product.

On baseline visit (Day 1), medical history and physical examination were performed, an Inclusion criterion was assessed and the trial treatment, i.e. Virechana by Aragvadha Kwatha was explained & subject started for Poorva-Karma (Internal & external Snehana, Swedana). After optimum signs of Internal & external Snehana, Swedana achieved then on next day morning about 8 A.M. empty stomach Aragvadha Kwatha (prepared as described in SOP) was administered orally & subject was observed through out the Pradhan Karma for Ayoga, Samyaka Yoga, Atiyoga or Vyapada.

After completing of Pradhan Karma subject was advised for post Panchakarma behavior regimen & Samsarjana Krama (diet regimen). On Day 21, subject was again accessed for the same symptoms.

Doses & Administration -

1. Snehapana – Plain Cow ghee was administered at empty stomach about 8 A.M. with luke warm water started with small dose of 25 m.l. then 50 m.l. next day....& so on till the Samyaka Snehana Symptoms appeared in the subject.
2. Sarvanga Snehana & Sarvanga Swedana – After Samyaka Snehana Symptoms appearance subject was followed by Sarvanga Snehana by luke sesame oil & Sarvanga Swedana by Dashmoola decoction in Sarvanga Bashpa Petika for 3 days.
3. Virechana Yoga (I.P.) – After Sarvanga Snehana & Sarvanga Swedana; 50 m.l. dose of Aragvadha Kwatha was administered orally at empty stomach in the morning about 8 A.M.

Standard Operative Procedure for preparation of Aragvadha Kwatha –

Aragvadha pulp 12.5 grams + water 200 m.l., boil the mixture on low flame till it remains 50 m.l., after that filter the mixture & use it in luke warm form.

Safety & Tolerability Variables -

Safety was assessed primarily through incidence of adverse events (AE) & clinical evaluation of the subject.

Observations:

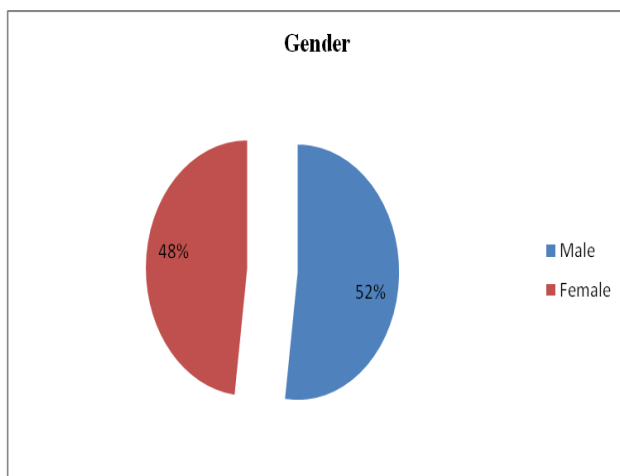
Data analysis was done by using SPSS 17.0 statistical software. We have used Wilcoxon Sign Rank test to find out the significance before study treatment & after study treatment. It is observed that in the study treatment, i.e. Virechana by Aragvadha Kwatha in Pittaja Kushta; P-value <0.05, hence considered as significant.

Gender –

In this research study, the gender proportion of subjects was 48% females & 52 % males. Average age of subjects was 43.32% with standard deviation of 8.895 %.

Gender		
	Number of patients	Percent
Male	26	52.0
Female	24	48.0
Total	50	100.0

Table 1: Gender



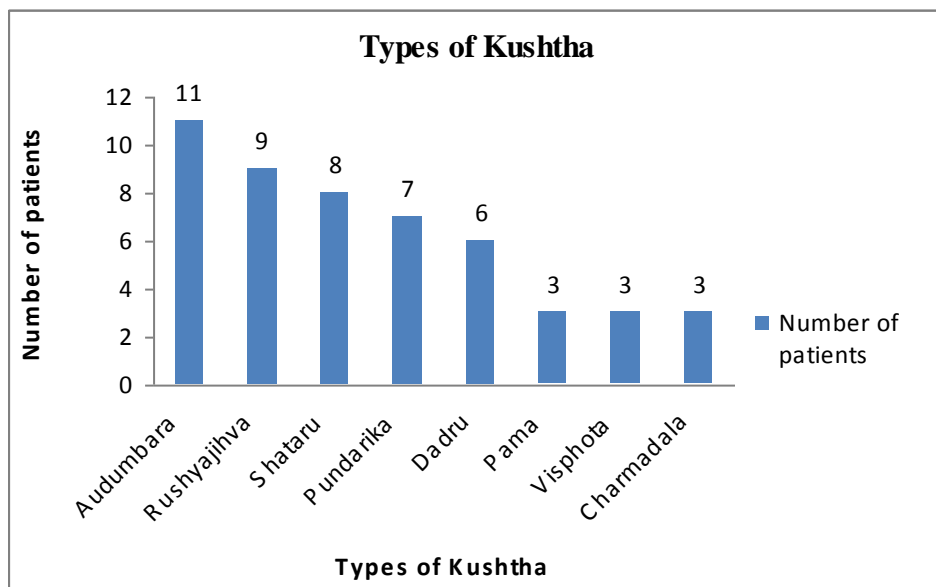
Graph 1: Gender

Kushtha Types –

Out of 50 numbers of subjects; Subjects with Audumbara type of Kushtha was 22 %, Rushyajivha -18%, Shataru – 16%, Pundarika - 14%, Dadru – 12 % & Pama, Visphotaka & Charmadala was each 6%.

Type of Kushtha	Number of patients	Percentage (%)
Audumbara	11	22.00
Rushyajihva	9	18.00
Shataru	8	16.00
Pundarika	7	14.00
Dadru	6	12.00
Pama	3	6.00
Visphotaka	3	6.00
Charmadala	3	6.00

Table 2 : Kushtha Types



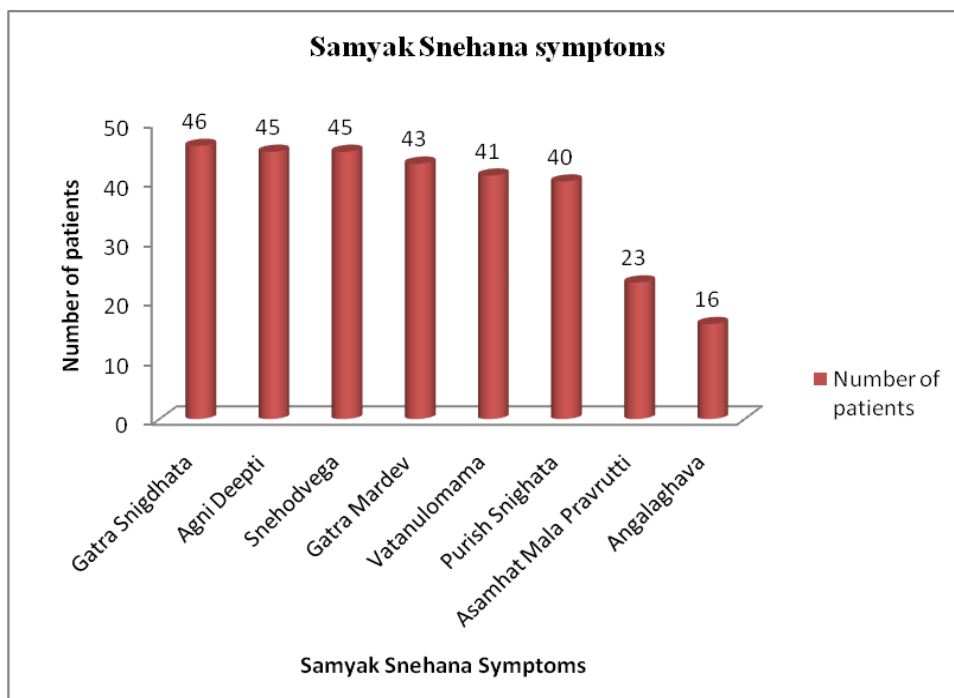
Graph 2 : Kushtha Types

Samyak Snehana Symptoms –

Out of total 8 Samyak Snehana symptoms described by Charak Samhita, Gatra Snigdhatta was occurred in 92%, Agni Deepti was in 90%, Snehodvega was in 90%, Gatra Mardava was in 86%, Vatanulomama was in 82%, Purish Snigdhatta was in 80% & Asamhat Mala Pravritti was 46%. The symptom ‘Angalaghava’ was 32%.

Samyak Snehana Symptoms	Number of patients	Percentage (%)
Gatra Snigdhatta	46	92.0
Agni Deepti	45	90.0
Snehodvega	45	90.0
Gatra Mardava	43	86.0
Vatanulomama	41	82.0
Purish Snigdhatta	40	80.0
Asamhat Mala Pravritti	23	46.0
Angalaghava	16	32.0

Table 3 : Samyak Snehana Symptoms



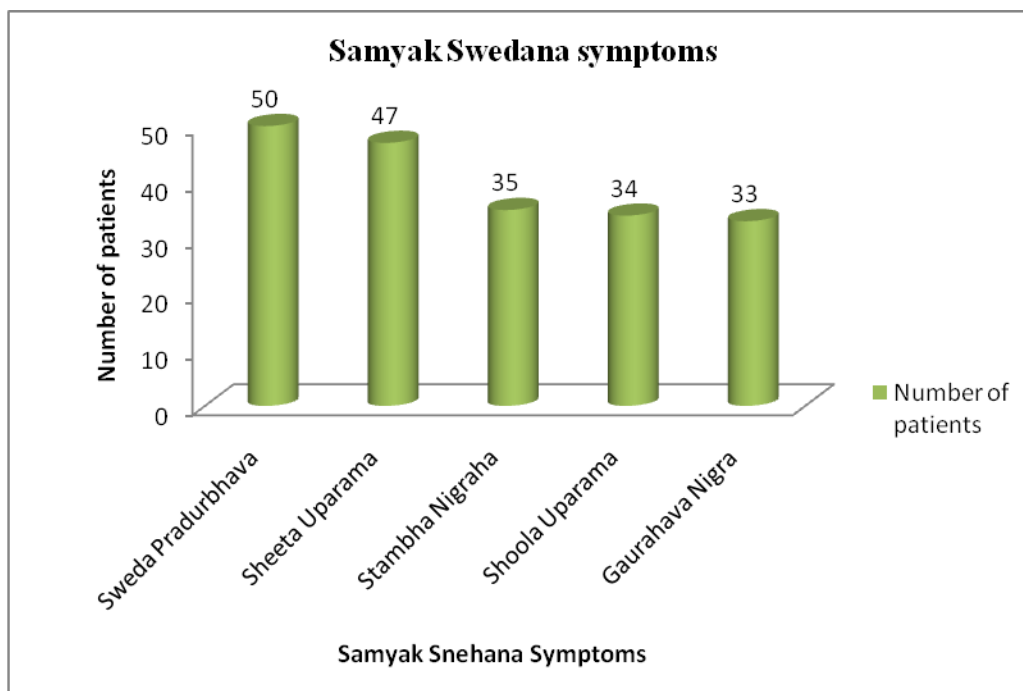
Graph 3 : Samyak Snehana Symptoms

Samyak Swedana Symptoms –

Out of total 5 Samyak Swedana symptoms, Sweda Pradurbhava was observed in 100% subjects, Sheeta Uparama- 94%, Stambha Nigraha – 70%, Shoola Uparama – 68% & Gaurahava Nigraha was in 66% subjects.

Samyak Swadana Symptoms	Number of patients	Percentage (%)
Sweda Pradurbhava	50	100.0
Sheeta Uparama	47	94.0
Stambha Nigraha	35	70.0
Shoola Uparama	34	68.0
Gaurahava Nigraha	33	66.0

Table 4 : Samyak Swedana Symptoms



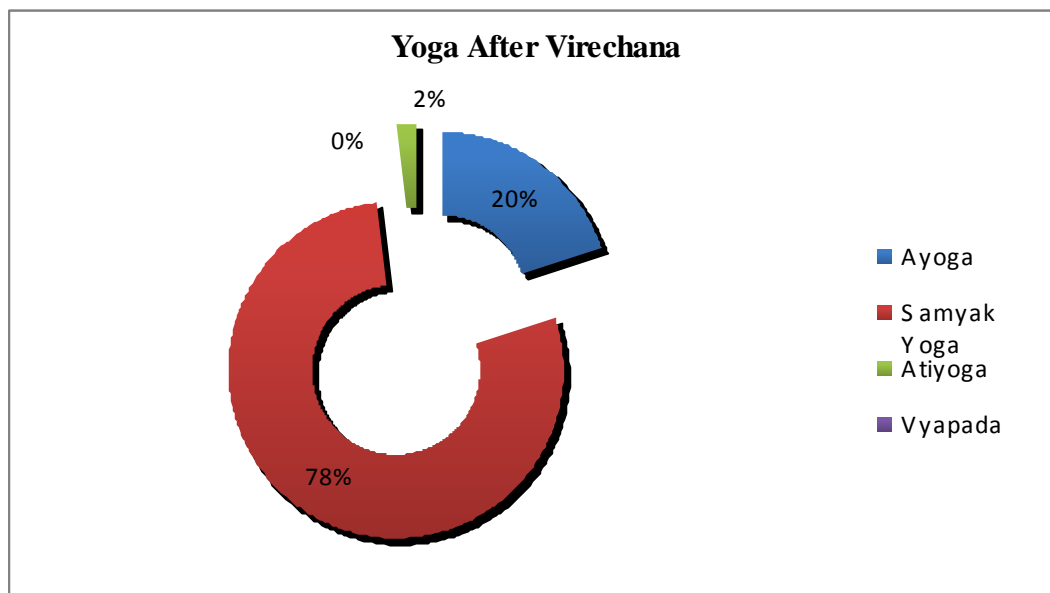
Graph 4 : Samyak Swedana Symptoms

Yoga after Virechana –

In this research study, total 78% subjects were having Samyak Yoga, which explains the proper effect of Virechana therapy by Aragvadha Kwatha. Ayoga, Heen-yoga was also recorded for 20% subjects & Atiyoga was observed in 2%. Safety of Aragvadha drug as a choice for Virechana can be proved by 0% of Vyapada (complications) in this study.

	Number of patients	Percent
Ayoga	10	20.0
Samyak – Yoga	39	78.0
Atiyoga	1	2.0
Vyapada	0	.0
Total	50	100.0

Table 5 : Yoga after Virechana



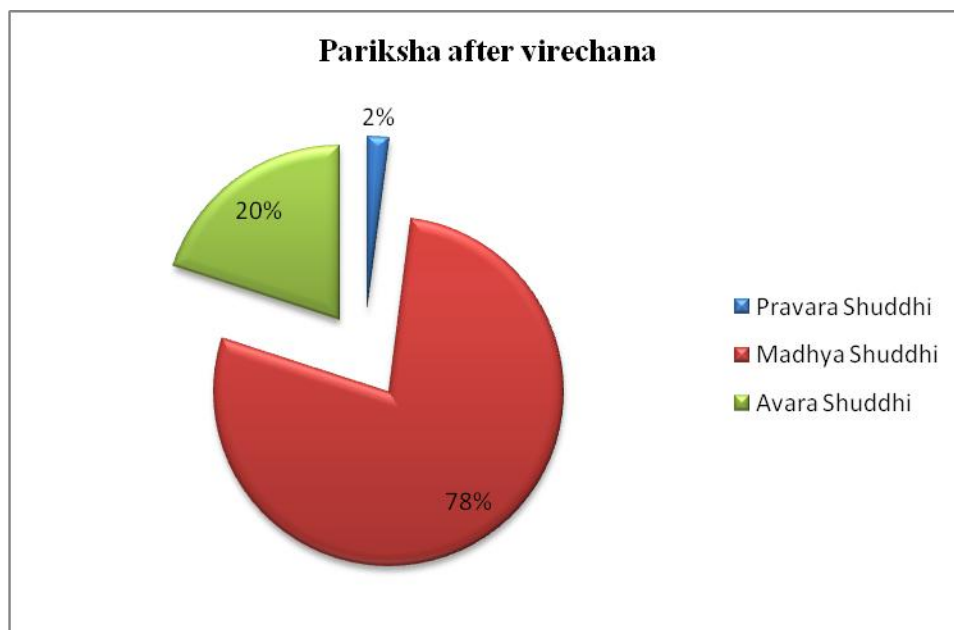
Graph 5 : Yoga after Virechana

Pariksha of Virechana –

The total analysis of Virechana procedure is done by ‘Pariksha’. In this study 78% subjects was of Madhya Shuddhi, 20% was of Avara Shuddhi & 2 % was of Pravara Shuddhi.

Pariksha	Number of patients	Percent
Pravara Shuddhi	1	2.0
Madhya Shuddhi	39	78.0
Avara Shuddhi	10	20.0
Total	50	100.0

Table 6 : Pariksha of Virechana



Graph 6 : Pariksha of Virechana

Redness Symptom –

By using Wilcoxon Sign Rank Test, P-value < 0.05 therefore there is significant difference between pre-treatment & post-treatment symptom. Out of 50 subjects 58% (n=29) of Grade 2 was in pre-treatment, which after treatment was 58% (n = 29) of Grade 1 after treatment.

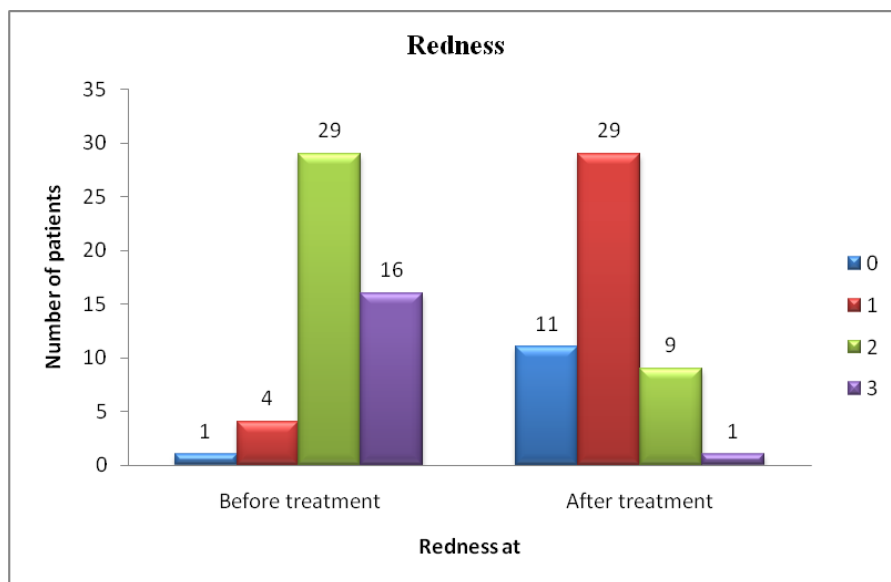
About this symptom Negative rank was in 41 subjects, Positive Rank was in 1 subject & Ties was in 7 subjects.

Grade	Before treatment	After treatment
0	1 (2%)	11 (22%)
1	4 (8%)	29 (58%)
2	29 (58%)	9 (18%)
3	16 (32%)	1 (2%)

	Number of patients	P-value
Negative Rank	41	<0.001
Positive Rank	1	
Ties	7	

test Used
Wilcoxon
Sign Rank
Test

Table 7 : Redness Symptom



Graph 7 : Redness Symptom

Pimple Symptom -

By using Wilcoxon Sign Rank Test, P-value < 0.05 therefore there is significant difference between pre-treatment & post-treatment symptom. Out of 50 subjects 60% (n=30) of Grade 2 was in pre-treatment, which after treatment was 44% (n=22) of Grade 0 after treatment.

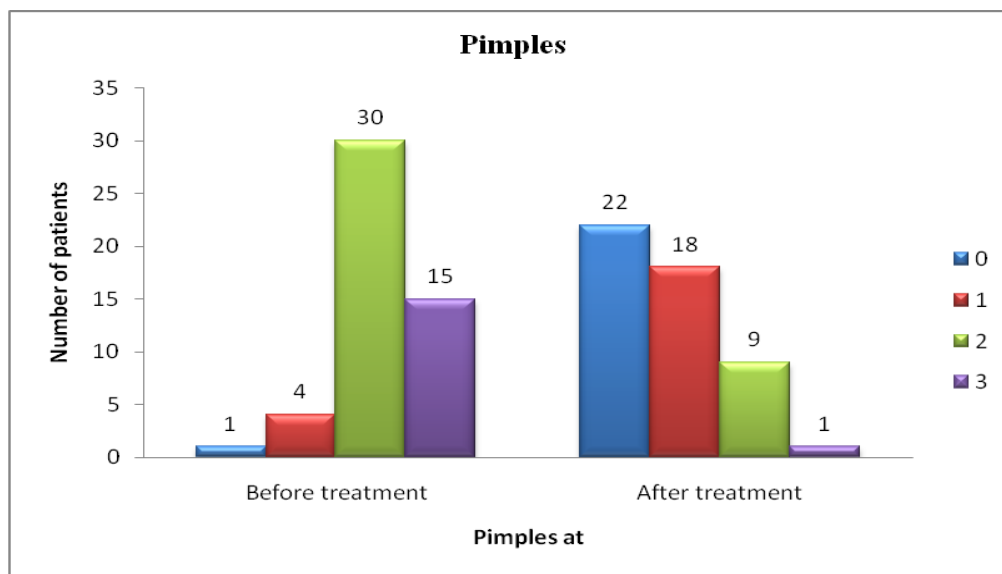
Present research study had shown that before treatment the pimple symptom Negative rank was in 38 subjects, Positive Rank was in 1 subject & Ties was in 11 subjects.

Grade	Before treatment	After treatment
0	1 (2%)	22 (44%)
1	4 (8%)	18 (36%)
2	30 (60%)	9 (18)
3	15 (30%)	1 (2%)

	Number of patients	P-value
Negative Rank	38	<0.001
Positive Rank	1	
Ties	11	

Wilcoxon Sign Rank Test

Table 8 : Pimple Symptom



Graph 8 : Pimple Symptom

Discharge Symptom –

About this symptom also Wilcoxon Sign Rank Test was used, then P-value < 0.05 therefore there is significant difference between pre-treatment & post-treatment symptom. Out of 50 subjects 36% (n =18) of Grade 2 was in pre-treatment, which after treatment was 50% (n = 25) of Grade 0 after treatment.

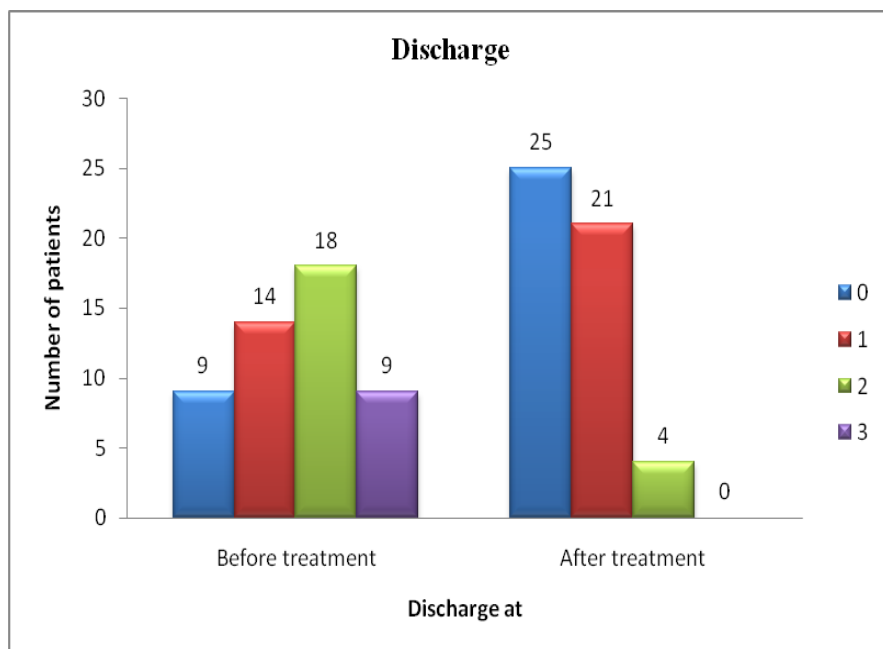
This study had shown that before treatment the discharge symptom Negative rank was in 31 subjects, Positive Rank was in 00 subjects & Ties was in 19 subjects.

Grade	Before treatment	After treatment
0	9 (18%)	25 (50%)
1	14 (28%)	21 (42%)
2	18 (36%)	4 (8%)
3	9 (18%)	0 (0%)

	Number of patients	P-value
Negative Rank	31	<0.001
Positive Rank	0	
Ties	19	

Wilcoxon Sign Rank Test

Table 9 : Discharge Symptom



Graph 9 : Discharge Symptom

Burning Sensation Symptom -

Regarding this symptom Wilcoxon Sign Rank Test was used, then P-value < 0.05 therefore there is significant difference between pre-treatment & post-treatment symptom. Out of 50 subjects 32% (n =16) of Grade 5 was in pre-treatment, which after treatment was 8% (n = 4) of Grade 1 after treatment.

About this study we had found that before treatment the burning sensation symptom Negative rank was in 45 subjects, Positive Rank was in 00 subjects & Ties was in 5 subjects.

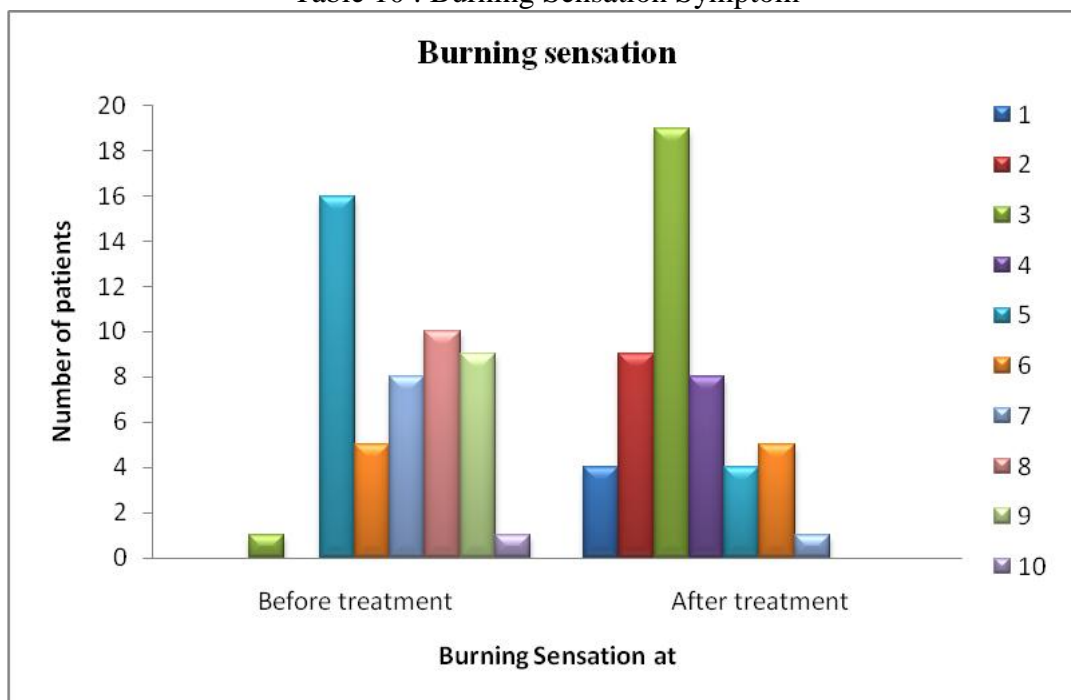
Grade	Before treatment	After Treatment
1	0 (0%)	4 (8%)
2	0 (0%)	9 (18%)
3	1 (2%)	19 (38%)
4	0 (0%)	8 (16%)
5	16 (32%)	4 (8%)
6	5 (10%)	5 (10%)

	Number of patients	P-value
Negative Rank	45	<0.001
Positive Rank	0	
Ties	5	

Wilcoxon
Sign Rank
Test

7	8 (16%)	1 (2%)
8	10 (20%)	0 (0%)
9	9 (18%)	0 (0%)
10	1 (2%)	0 (0%)

Table 10 : Burning Sensation Symptom



Graph 10 : Burning Sensation Symptom

Itching Symptom -

Concerned with this symptom Wilcoxon Sign Rank Test was used, then P-value < 0.05 therefore there is significant difference between pre-treatment & post-treatment symptom. Out of 50 subjects 22% (n =11) of Grade 10 was in pre-treatment, which after treatment was 24% (n = 12) of Grade 2 after treatment. This research study had shown that before treatment the itching symptom Negative rank was in 48 subjects, Positive Rank was in 00 subjects & Ties was in 2 subjects.

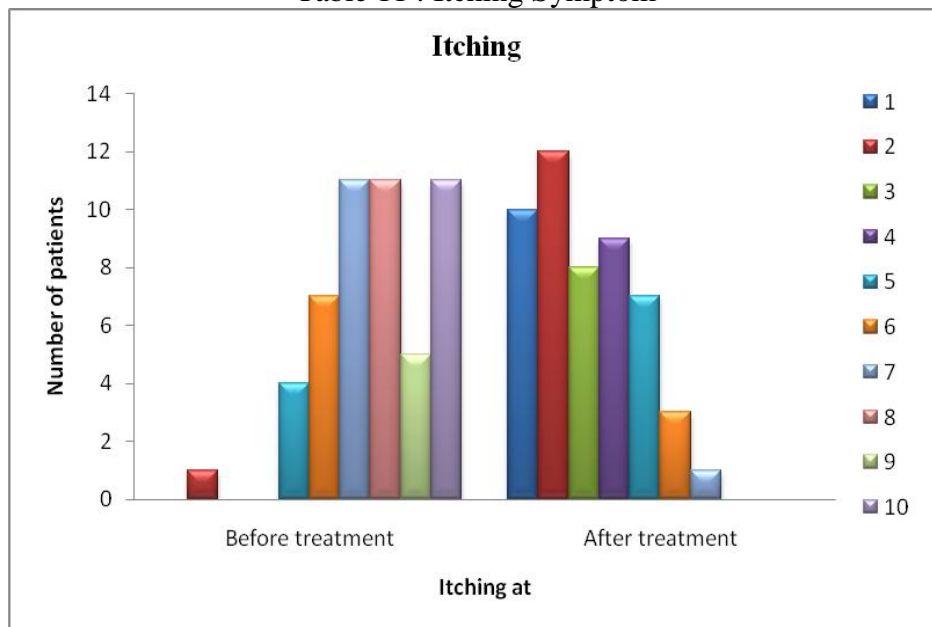
Grade	Before treatment	After Treatment
1	0 (0%)	10 (20%)
2	1 (2%)	12 (24%)
3	0 (0%)	8 (16%)
4	0 (0%)	9 (18%)
5	4 (8%)	7 (14%)
6	7 (14%)	3 (6%)

	Number of patients	P-value
Negative Rank	48	<0.001
Positive Rank	0	
Ties	2	

Wilcoxon Sign Rank Test

7	11 (22%)	1 (2%)
8	11 (22%)	0 (0%)
9	5 (10%)	0 (0%)
10	11 (22%)	0 (0%)

Table 11 : Itching Symptom



Graph 11 : Itching Symptom

Discussion:

Comparative data analysis revealed that the 'p' value in all the symptoms (redness, pimples, discharge, burning sensation & itching) was highly significant. From the data of the objective features, the 'p' values were almost highly significant ($P < 0.001$) in all the parameters. Hence, it can be concluded that the Virechana by Aragvadhadi Kwatha is more effective in Pittaja Kushtha. The results are encouraging and support the classical claim that Aragvadhadi is effective in reducing the symptoms of Pittaja Kushtha and can be used extensively in the treatment.

Probable mode of action of the Aragvadhadi in Pittaja Kushtha:

All types of Kushtha are Tridoshaja, hence one should treat the patient according to dominance of vitiated Dosha. Symptomatically the vitiated Dosha which is more dominant that should be treated first (Ch. Chi. 7/29, 30). As per these guidelines of Charak, instead of going in details of 18 types of skin disease, this study is about Pittaja Kushtha. Charaka has recommended Shodhana in Pittaja Kushtha & has given more emphasis on Virechana Karma to balance the vitiated Pitta Dosha. Much number of drugs is described for Virechana Karma in classical texts. Out of these, for the present study Aragvadhadi (Cassia fistula Linn) was selected. Charaka has considered it as the best Virechana Dravya. Aragvadhadi is Madhura, Tikta Rasa; Guru, Mridu, Snigdha Guna; Sheeta Virya and Madhura Vipaka. Hence, the drug is useful in Pitta vitiation. In Ashtanga Hridaya, Aragvadhadi is described in the Kaphaghna Gana and in Sushruta Samhita, Aragvadhadi has been described as the Adhobhagadosahara Dravya. As per Charaka Samhita, Aragvadhadi is the best Mriduvirechana drug. Therefore, it helps in Kapha Nirharana along with Vatanulomana. Thus, the drug helps in Dosha-Dushya Vighatana in the disease Pittaja Kushtha.

Conclusion:

Aacharya Charak has explained very precisely about Shodhana & Shamana treatments of Kushtha with the formulations useful for it. He had given more emphasis on examining the Dosha Pradhanata instead of going details with types of Kushtha which is practical approach. Though it has been observed that Sushruta has described contamination is one of the Hetu (reasons) for Kushtha. About types some differences are finding in their categorization as Mahakushtha & Kshudrakushtha in between Charak & other Samhitas. According to dominance of vitiated Dosha, types are explained by Charak & as well as they are mentioned precisely in Madhav Nidan also. The quotation given by Vagbhata & Chakradatta is to be considered while treating skin diseases which advise to do Virechana every month in this disease.

On the basis of the results of this study it may be concluded that, analysis of the data of the present study reveals significant Kusthaghna activity of Aragvadha in subjects with Pittaja Kushtha (skin problems due to vitiated Pitta Dosha). As there was no complication, we can conclude that Aragvadha is safe drug of choice for Virechana in Pittaja Kushtha.

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