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RESEARCH ARTICLE

"AN OPEN LABELLED CLINICAL TRIAL TO EVALUATE THE EFFICACY OF MATRA BASTI WITH SUKUMARA GHRITA FOLLOWED BY THE ADMINISTRATION OF VAISHWANARA CHURNA IN THE MANGEMENT OF VIBANDHA VIS-À-VIS CONSTIPATION IN GERIATRIC AGE GROUP"

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Abstract

Background: Constipation is a frequently reported bowel symptom in the elderly with considerable impact on quality of life and health expenses. Disease-related morbidity and even mortality have been reported in the affected frail elderly. Although constipation is not a physiologic consequence of normal aging, decreased mobility, medications, underlying diseases, and rectal sensory-motor dysfunction may all contribute to its increased prevalence in older adults. Direct and explicit description of Vibandha as a disease is not found in Ayurveda but different presentation of Purisha like Baddha Purisha, Ghana Purisha/Grathita Purisha, Sushka Purisha, Mala avabaddhata are found in different contexts of Ayurveda, these can be taken as various manifestations of Vibandha

Objective Of The Study: To evaluate the effect of Matra basti with Sukumara ghrita, followed by the administration of Vaishwanara churna with ghrita in the management of Vibandha vis-a-vis constipation in geriatric population.

Methods: A clinical study with pre-post design. Data was collected on before intervention ie 0 day,mid intervention ,after matrabasti ie 9th day and and after the complete course of intervention,after internal administration of vaishwanara churna ie on 31 st day.The data obtained were analysed statistically by applying descriptive statistics,Paired t test and Chi square test,using statistical presentation system software (SPSS) for windows.

Intervention: Matra basti with sukumara ghrita for the first 8 consecutive days of intervention in the dose of 60 ml. After Matra basti, Vaishwanara churna with ghrita as anupana was administered internally in the dosage of 12 gms in two equally divided doses, before food, for 22 days. Total duration of the study was 30 days Bristol Stool form scale and Patient assessment of constipation-Quality of life were used to assess the pre and post data gathered through pre designed research proforma.The results having ' p' value of <0.001 was considered to be statistically highly significant in this study.

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Results: Overall assessment showed significant improvement in all the 32 subjects in this study.
Interpretation and Conclusion: It can be concluded that Matra basti with sukumara ghrita followed by internal administration of Vaishwanara churna showed better results in Bristol Stool form scale and Patient assessment of constipaion- Quality of life.

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Introduction:-

Most nations of the world are undergoing rapid and dramatic ageing. In developing countries of the world by the year 2050, at least 25 % of population will be older than 65 years of age and some regions exceeding 40%. The change in demographics of ageing are driven by increase in life expectancy, but also by decline in birth rates and infant mortality rates, especially in developing nations. Even though ageing is a unique natural biological process in every of species of multicellular animal after reproductive maturation, the old age population is vulnerable to encounter a series of diseases.

In geriatric age, constipation is a frequently reported bowel symptom,that poses considerable impact on quality of life and health expenses. Constipation is used to describe the symptoms pertaining to difficulties in defecation. These include infrequent bowel movements, hard or lumpy stools, excessive straining, sensation of incomplete evacuation or blockage and, in some instances, the use of manual manoeuvres to facilitate evacuation.

The prevalence of constipation increases with age: in over 65 year-old population studies, 26 % of women compared to 16 % of men considered themselves to be constipated. Drugs such as bulk forming agents, stimulants, stool softeners, osmotic agents and secretagogues are used depending upon the chronicity and severity of the condition. Though the conventional treatment is well established and safe, it doesn't provide satisfying improvement. Evidence supporting the use of bulk agents, stool softeners, stimulants and prokinetic agents are lacking, limited or inconsistent.

In Ayurveda, the terms like vibandha, malagraha, malabaddhata, malavarodha, varcha graha etc. can be correlated with constipation. Whereas geriatric age group is considered as a phase of life, with the predominance of vata dosha and this vata dosha plays a key role in the manifestation of vibandha in the old age. In the phase of old age,the optimum activity of Agni is hampered and thus due to Vishamagni (Hampered Agni)m in old age leads to Malakṣaya that majorly affects the quanity and quality of pureesha mala ie defective metabolism occurs within the body leading to Vibandha/Constipation[1]

An effort was made to study in detail about the causes, etiopathogensesis and management of constipation with the clinical study titled "A single arm clinical trial to evaluate the efficacy of matra basti with sukumara ghrita followed by the administration of vaishwanara churna in the management of vibandha vis-a-vis constipation in geriatric population." The qualities like vatha anulomana,,deepana,rasayana with sukumara ghrita ,if given in the form of Matra basti followed by administration of vaishwanara churna with the properties like deepana,vibandhgna,vatanulomana etc as a shamanaoushadhi was considered during the clinical study.

Objectives:-

To evaluate the effect of Matra basti with Sukumara ghrita, followed by the administration of vaishwanara churna with ghrita in the management of vibandha vis- a- vis constipation in geriatric population

Materials and Methods:-

Materials:-

The materials taken for the clinical study were

1. Sukumara ghrita
2. Vaishwanara churna

Sukumara Ghrita[2]
Sukumara ghrita was Procured from GMP Certified Vaidyaratnam oushadhashala, Mysuru.This ghrita was administered to the patients in the form of Matra basti for the first 8 consecutive days of the treatment in the dose of 60 ml

Vaishwanara Churna[3]
Vaishwanara churna was procured from GMP Certified Vaidyaratnam oushadha shala, Mysuru. Vaiswanara churna with sufficient quantity of ghrita was administered internally in the dosage of 12 gms ,before food, in divided doses for 22 days after the course of Matra basti

Research Design
The study was a single group open labelled clinical study with pre and post-test design.

Source Of Data
Subjects were selected incidentally from the OPD and IPD of Government Ayurveda Medical college and hospital, Mysuru, Government Hi- Tech Panchakarma hospital, Mysuru and also from other referral sources, who were diagnosed with vibandha vis – a vis Geriatric constipation. Out of the 38 patients registered, 32 patients completed the study.

Sampling Method:-
Total number of 32 patients excluding drop outs were taken and assigned into the single group.

Diagnostic Criteria
ROME IV Diagnostic criteria.[5]

The symptoms of Functional Constipation must include two or more of the following over the preceding 3 months.
1. Straining more than 25% of defecations.
2. Lumpy or hard stools (Bristol stool form scale- BSFS type 1 or 2) in more than 25% of defecations.
3. Sensation of incomplete evacuation more than one-fourth (25%) of defecations.
4. Sensation of anorectal obstruction/blockage more than one-fourth (25%) of defecations.
5. Manual maneuvers to facilitate more than one fourth (25%) of defecations.
6. Fewer than three spontaneous bowel movements per week

(These patients do not fulfil the criteria for IBS, as abdominal pain is absent/not predominant or occurs less than 1 day per week)

Inclusion Criteria
1. Subjects of 60-75 years of age group irrespective of gender, caste and religion were included
2. Patients with a stool form score 1 or 2 on the Bristol stool form scale (BSFS) were included
3. Patients meeting the ROME IV diagnostic criteria, for functional constipation were included.

Exclusion Criteria
1. Subjects on medications known to cause secondary constipation like opioidanalgesics, anticonvulsants, tricyclic depressants
2. Subjects with structural gastrointestinal disorders like Colorectal carcinoma , Diverticulosis, Stricture , InternalIHaemorrhoids , Rectal prolapse
3. Subjects with blood pressure levels above the range of 150/100 mmHg
4. Subjects of uncontrolled diabetes with random blood sugar level above 250 mg/dl

Intervention:
Matra Basti
Matra basti with sukumara ghrita for the first 8 consecutive days of intervention inthe dose of 60 ml.

• Shamanoushadhi

After Matra basti, Vaishwanara churna with ghrita as anupana was administered internally in the dosage of 12 gms in two equally divided doses, before food, for 22
days.

Total duration of the study was 30 days

Method Of Assesment Of Treatment
Assessment Schedule
Assessment using Bristol stool form scale was done on (0^{th}) day, (9^{th}) day after Matra basti and on (31^{s}) after intervention.

Assessment Parameters
Bristol Stool Form Scale.[6]

Table no 1:- Showing bristol stool form scale.

TYPES	CHARACTERISTICS
TYPE 1	Separate hard lumps like nuts(hard to pass)
TYPE 2	Sausage – shaped, but lumpy
TYPE 3	Like a sausage, but with cracks on its surface
TYPE 4	Like a sausage or snake, smooth and soft
TYPE 5	Soft blobs with clear cut edges(passed easily)
TYPE 6	Fluffy pieces with ragged edges, a mushy stool
TYPE 7	Liquid consistency with no solid pieces

PAC – QOL – Patient assessment of constipation – quality of life- were assessed during the primary visit(0^{th} day),after Matra basti (9^{th} day) and on the 30^{th} day, after the completion of intervention.

The data were collected before the treatment, on the 9 th day of treatment and after 1 month of treatmentThe data obtained were analysed statistically by applying the following statistical methods.

Statistical Methods:-

The results were analysed statistically by using following statistical methods
1. Descriptive statistics-Mean, standard deviation, frequency, percentile
2. Inferential statistics-t test-paired sample, chi-square test, Wilcoxon signed rank test.
3. All the statistical methods were done using SPSS for windows.

Results:-

A.Bristolstoolformscale

Bristolstoolformscale-Beforetreatment
28 subjectsie87.5%hadgrade 1,2subjectsie6.3%hadgrade2and2 subjectsie6.3%had grade 3in Bristolstool formscaleonthe 0thdayofassessment

Table no 2:- Showing results of Bristol stool form scale -before treatment.

Grade(BSF)	Frequency	Percentage
1	28	87.5
2	2	6.3
3	2	6.3
Total	32	100.0

Bristolstoolformscale-Midtreatment
Outof32subjects,15subjectsie46.9%hadgrade5,11subjects(34.4%)hadgrade 4 ,5 subjects(15.6%)had grade 3 and only 1 subject(3.1%) had grade 2 inBristolstool formscaleduring mid-assessmenton9thedayoftreatment

Table no 3:- Showing results of Bristol stool form scale -Mid treatment.

Grade(BSF)	Frequency	Percentage
2	1	3.1
3	5	15.6
4	11	34.4
5	15	46.9
Total	32	100.0

Bristolstoolformscale-Aftertreatment

Out of 32subjects,16 subjects ie 50% of subjects had grade 5,12 subjectsie37.5%had grade 4 and 4 subjects ie 12.5% had grade 3 in Bristol stool formscaleon31stdayof assessmentaftertreatment

Table no 4:- Showing results of Bristol stool form scale -After treatment.

Grade(BSF)	Frequency	Percentage
3	4	12.5
4	12	37.5
5	16	50
Total	32	100

Tableno 5:- showingthecomparisonoverthegradeofbristolstoolformscalebefore,mid andafter thetreatmentof vibandha

	BT		MT		AT	
Grade	F	P	F	P	F	P
1	0	0	0	0	0	0
2	28	87.5	0	0	0	0
3	2	6.3	1	3.1	0	0
4	2	6.3	5	15.6	4	12.5
5	0	0	11	34.4	12	37.5
6	0	0	15	46.9	16	50.0

Fromthetable,itisevidentthatthereissignificantimprovementofscoreof87.5%ofgrade 1 ,beforetreatmentto 50%of grade5after treatment

Discussion On Vaishwanara Churna:-

The probable mode of action of the drug can be explained from the results obtained. The ingredients of Vaishvanara churna' are Saindhava lavana, Ajwain, Ajamoda, Shunthi and Haritaki. All the constituents of drug are having Ushna Veerya, Madhura, Katu Vipaka and Vata Kapha Shamaka properties. Haritaki and Saindhava are having Tridoshashamaka property. All the ingredients of Vaishvanara churna are having deepana, pachana, anulomana properties which improve the status of Agni, subsequently prevent Ama formation and vitiation of dosha. Vaishwanara churna was selected for the purpose of agni dipana , as most of its ingredeients possess katu,tiktha,kashaya,laghu,ruksha,tikshna guna,ushna veerya,deepana pachana properties.

Discussion On Sukumara Ghrita

This ghrita preaparation is explained in the context of sahasrayoga ghritha prakarana and in ashtanga hridaya ,vidhradhi vridhi chikitsa.Though it is a ghrita based formulation, it is also known as Sukumara rasayanam as it contains castor oil, milk, and jaggery and many of the herbs are nourishing, strengthening and aphrodisiac in potency. Sukumara Ghrita is one of the examples for Yamaka (combination of two Sneha) type of Sneha which contains Ghrita (ghee) and Eranda Taila (castor oil) as ingredient..The name Sukumara means beautiful but in Ayurveda the term refers to a person who cannot withstand any harsh or even mild suffering. This combnation is specially advised for such people.It can also be considered as the best Rasayana for very busy persons like Eswara, Raja etc who cant follow the strict rules of Rasayana sevanavidhi.

Discussion On Matra Basti

Probable mode of action of Matra-Basti:

Basti therapy is considered as prime among all the therapeutic measures, especially for management of Vatavyadhis.Our Acharyas have considered the rectum (Guda) as the root of the body (Mula of Sharira). According to Acharya Charaka: 'As a tree irrigated in its root attains blue branches with beautiful tender leaves, flowers and fruits in time, and attains a big stature, so too the man with unctuous enema given through the rectum.

Matra Basti is a type of Sneha Basti i,e AnuvasanaBasti. It promotes strength and can be administered easily. It helps in early voiding (elimination) of stool. This type of basti is indicated especially in bala,vridha as well as sukumaras.For Matra Basti, the dose of Sneha to be given is equal to the minimum quantity prescribed for Anuvasana Basti. This dose gets digested in half of the day (2 Yama i.e. 6 hours) is called as Harsva. Dose of Sneha in Matra Basti is very small which can get easily absorbed in the body without coming out. It is believed that Sneha Basti should retain in the body. it is indicated in those who are habituated to exercise ,lifting heavy weights,too much indulgence in travelling and sexual indulgence,debilitated and injured by trauma .I it increases strength,easy evacuation of stools.It is said to be nourishing and wiping of vatha rogas.

In the present study, sukumara ghrita was used for Matra Basti. Sukumara ghrita was opted for administering basti as the formulation renders the properties of snehana,deepana,vathanulomana,rasayana,brihmana which were essentially required in subjects of geriatric constipation.

Conclusion:-

Chronicconstipation(CC)isacommondisorderintheelderlypopulationglobally and is associated with comorbidities and negative implications on thequality of life. Ayurveda- the science of life has considered Jara under theumbrellatermof Svabhava-Bala-Pravrutta-Roga.DirectandexplicitdescriptionofVibandhaasadiseaseisnotfoundinAyurveda, butdifferentpresentationofPurishalikeBaddhaPurisha,GhanaPurisha/GrathitaPurisha, Sushka Purisha, Mala avabaddhata are found in different contexts ofAyurveda.Non-complianceofhealthydiet,healthylifestyleandmentalstress&strain areresponsible for thisdisease.

In the present study, an attempt was made to validate the efficacy of Matra bastiwithsukumaraghritafollowedbytheinternaladministrationofshamanoushadhinamedvaishwanarachurna.Thequalitie slikevathaanulomana,deepana,rasayanaofsukumragrutha,intheformofMatrabastianddeepana,vibandhgna and vatanulomana property ofVaishwanara churna was used in thisclinical trial.

StatisticalresultsonparameterlikeBristolstoolformscaleandpatientassessment on constipation-quality of life showed highly significant result at theend ofinterventionwiththe pvalue of0.001.The intervention of Matrabasti with sukumara ghrita followed by the internaladministrationofvaishwanarachurnaisfoundtobeeffectiveinthemanagementofgeriatric constipation

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Refernces:-

1. 1.Lingu Inya , Rumy (Chowlu) Lingu , Kulkarni P,exploring the brain-gut axis in etiopathogenesis of elderly constipation and its management with shankhapushpi (convolvulus pluricaulis) & vaishvanara churna , International Ayurvedic Medical Journal, India 2020
2. Prof.K.R Srikantha Murthy,vagbhata's astanga hrdayam,sutra sthana,chapter 11 ,verse 14 ,Varanasi, Chowkhamba Krishnadas academy ,2013
3. Chakradatta of chakrapanidatta,English translation by Dr.G.Prabhakara Rao,Chikits asthana Amavata chikitsa,Verse no 15-18,chaukhabha orietalia,varanasi,2018
4. Bae SH. Diets for constipation. Pediatr Gastroenterol Hepatol Nutr. 2014 Dec;17(4):203-8. doi: 10.5223/pghn.2014.17.4.203. Epub 2014 Dec 31. PMID: 25587519; PMCID: PMC4291444.
5. Storz MA, Rizzo G, Müller A, Lombardo M. Bowel Health in U.S. Vegetarians: A 4-Year Data Report from the National Health and Nutrition Examination Survey (NHANES). Nutrients. 2022 Feb 6;14(3):681. doi: 10.3390/nu14030681. PMID: 35277040; PMCID: PMC8838274.