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Comparative study of *Chitrikadi Vati* and *Medhya Vati* on psychotic factor in *Agni Dusti* w.s.r. to *Grahani Dosha*

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Abstract-

ancient science Ayueveda has a apporh to the health is psychosomatic in nature. The primary principle of Ayurveda is dosha which is also divided in two parts that is sharirika dosh and manshika dosha. These both type of dosha are equally effects each other that's manas bhavas are depend on sharirika bhavas and vice versa. Same as the causative factor of a disease may effects sharirika dosha , mansika dosha or both. In present study we are trying to stabilized relation between manas bhava and agni dusti W.S.R. to grahani dosha. So the present study Comparative study of chitrikadi vati and medhya vati on psychotic factor in agni dusti w.s.r. to Grahani dosha, has 3 groups. Group A contains Chitrikadi vati 2 tab. BD, Group B contains

Medhya vati 2 tab. BD and Group C contains both Chitrikadi vati 2 tab. BD and Medhya vati 2 tab. BD. The data collection, analysis and conclusion drawn from it is elaborated in this article.

Key words- Mansika dosha, Agni, Grahani dosha, Medhya vati, data analysis

Introduction:

Human body is the most previous gift to the God to mankind. To keep Human body free from various disease and to maintain health, clinical research work is required to be undertaken from time to time. Before employing any method, any medicine or therapy, it is essential, first to conduct research on a small group of patients, to study the efficacy of particular method medicine, or therapy.

According to *Ayurvedic* classics the basic approach to the concept of health is essentially psychosomatic in nature. *Manasika* and *Sharirika* are regarded as separate entities in *Ayurveda* but not in the sense of separatism because an organism is the complex combination of mind, soul and body. *Sharirika* and *Manasikadoshas* are found to be affecting mutually each other[i]. In *Ayurveda* classic, the effects of psychic (or mental) disorders on the body have also been mentioned. The emotions like anger, fear and grief etc. have their own effects on the *Agni*[ii]. So the present study entitled "Epidemiological Study To Ascertain the Psychological Factors In *Agnidushti* With Special Reference To *Grahani Dosha* And Clinical Trial Of *Chitrakadi Vati & Medhyavati"* was undertaken.

1. Aims and Objectives

Present research work includes following objectives-

1) To conduct an Epidemiological Study To Ascertain The Psychological Factors In *Agnidushti* With Special Reference To *Grahani Dosha.*

2) To conduct an *Upshayatmaka* trial of *Ayurvedic* drugs on *Grahani Dosha* patients.

2. Material and Methods

Patients:

For the clinical study, 90 Patients were selected from the O.P.D and I.P.D of PG Deptt.*Rog Nidana EvumVikriti Vigyan*, National Institute of *Ayurveda, Jaipur*. Voluntary written informed consent had been taken from each subject before trial starts.

Drugs production :

All the raw drugs for *Chitrakadi Vati* and *Medhya Vati* were procured from the Pharmacy, National Institute of Ayurveda, Jaipur, Rajsthan

Posology:

Group	Drug	Form	Dose	Route and Time of Administration	Duration
A	*ChitrakadiVati*	*Vati*	2 vati (5oomg each)	**Route: Oral** **Time: Apana Kala** (twice daily after meal)	One month
B	*MedhyaVati*	*Vati*	2 vati (5oomg each)	**Route: Oral** **Time: Apana Kala** (twice daily after meal)	One month
C	*ChitrakadiVati*	*Vati*	2 vati (5oomg each)	**Route: Oral** **Time: Apana Kala** (twice daily after meal)	One month
	MedhyaVati	*Vati*	2 vati (5oomg each)	**Route: Oral** **Time: Apana Kala** (twice daily after meal)	One month

Criteria for selection of patient:

Inclusion criteria of patient:

- Patient having symptoms of *Vataja Grahani Dosha*.
- Age 16-70 yrs
- Either sex
- Willing to participate in the study.

Exclusion criteria of patient

- Patients of *Asadhya Lkshana* & *Upadrava* of *Grahani Dosha*.
- Patients suffering from major acute disease like TB, Cancer, HIV, Pregnant and lactating females.
- Patients suffering from acute diarrhea, intestinal tuberculosis, ulcerative colitis, gastric and peptic ulcer, diabetes mellitus, hypertension, other forms of colitis like Behcet's disease, collagenous colitis, colitis associated with significant complications like hemorrhage, perforation, strictures, colonic cancer, toxic mega colon, hemolytic canaemia, and liver cirrhosis.

Criteria for assessment

Subjective parameters:

More emphasis was given on:-

- *MuhurMuhur Mala Pravritti*
- *Baddha mala,*
- *Drava mala,*
- Abdominal pain or any discomfort
- Mucous in stool
- Gas or flatulence & Oudor in stool,
- *Arochaka*
- *Balakshaya* which were classified into grades.

The improvement in grade was recorded at different levels.

Objective parameters:

i. Routine Hb, T.L.C., D.L.C. & ESR were carried out in all the patients before & after treatment
ii. Serum alkaline phosphate
iii. Urine Routine and Microscopic examination

❖ ***Pathya Ahara:*** All the patients were advised to take *Laghu, Ushna* and *Snigdha Ahara*

✓ To have more cow's milk and cow ghee.
✓ Goat milk
✓ Regular intake of butter
✓ Sesame oil
✓ Take old rice
✓ Easy to digest food
✓ Warm water
✓ Fiber rich diet
✓ *Karela*, garlic, onion, *Krishna Jeeraka (Nigella sativa), Amalaki, Draksha, Dadima, Kapittha* etc. add in food.
✓ Medicated wines

Apathya Ahara

✓ *Paryushita Ahara*
✓ *AtisheetaUdaka* and *Ahara*
✓ *RukshaAhara* →*Besana* etc.
✓ *VatalaAhara* →Potato, Chana, ladies finger, cabbage, cauliflower etc.
✓ Artificially preserved or coloured food, fermented food.
✓ Avoid oily & spicy food,.
✓ To avoid over eating, fried food, bakery items, fermented items, cold drinks, Junk food, Ice creams, Chocolates
✓ Alcohol, Sukta (acidic beverages)

Pathya Vihara

✓ Manage stress levels
✓ Proper sleep
✓ Share the burden and get good support from your family and friends.
✓ Regular exercise, *Pranayama, suryanamaskara*.

ApathyaVihar

✓ *Divaswapna*
✓ *Atichankramana*
✓ *Ratrijagaranaetc*
✓ *Vegadharana*(withholding of urge)
✓ To avoid Mental Stress.
✓ Exposure to cold weather or air.
✓ Exposure to sun and heat
✓ Less Physical activity

Notification of complications:

✓ No any complications were identified during study.

Observation and Results-

This clinical trial comprised of three study groupviz Group A, group B and group C. The comparison was done by applying following tests:

i. For subjective variables-

- Nonparametric ANOVA (Kruskal-Wallis Test)
- Dunn's Multiple Comparisons Test as post test

ii. For Quantitative variables-

- One way Analysis of Variance (Parametric ANOVA)
- Tukey- Kramer multiple Comparisons test as post test

For calculation of statistical values in the following tables, following abbreviation is being used

H.S. = Highly Significant

V.S. = Very Significant

1. For Subjective parameters-

Comparison of effect of trial drugs on *MuhurMuhurMala Pravritti*

Kruskal-Wallis Test (Nonparametric ANOVA)

Group	N	Sum of Ranks	Mean of Ranks	KW	P value	Remarks
A	30	1370	45.667	26.415	<0.0001	ES
B	30	881.0	29.367			
C	30	1844.0	61.467			
Variation among Group medians is significantly greater than expected by chance (P<0.0001)						

Dunn's Multiple Comparisons Test

Group Comparisons	Mean Difference	P	Remarks
A VS B	16.3	P>0.05	S
A VS C	-15.8	P<0.05	S
B VS C	-32.1	P>0.001	ES

Comparison of effect of trial drugs on *BADHHA MALA PRAVRITTI*

Kruskal-Wallis Test (Nonparametric ANOVA)

Group	N	Sum of	Mean of	KW	P value	Remarks

		Ranks	Ranks			
A	30	1531.5	51.050	34.056	<0.0001	ES
B	30	759.00	25.30			
C	30	1804	60.15			
Variation among Group medians is significantly greater than expected by chance (P<0.0001)						

Dunn's Multiple Comparisons Test

Group Comparisons	Mean Difference	P	Remarks
A VS B	25.75	P>0.001	ES
A VS C	-9.10	P>0.05	NS
B VS C	-34.85	P>0.001	ES

Comparison of effect of trial drugs on DRAVA MALA PRAVRITTI

Kruskal-Wallis Test (Nonparametric ANOVA)

Group	N	Sum of Ranks	Mean of Ranks	KW	P value	Remarks
A	30	1658.0	55.267	35.305	<0.0001	ES
B	30	725.00	24.167			
C	30	1712.0	57.067			
Variation among Group medians is significantly greater than expected by chance (P<0.0001						

Dunn's Multiple Comparisons Test

Group Comparisons	Mean Difference	P	Remarks
A VS B	31.1	P>0.001	ES
A VS C	-1.80	P>0.05	NS
B VS C	-32.90	P>0.001	ES

Comparison of effect of trial drugs on ABDOMINAL PAIN

Kruskal-Wallis Test (Nonparametric ANOVA)

Group	N	Sum of Ranks	Mean of Ranks	KW	P value	Remarks
A	30	1335.0	44.5	4.045	0.1323	NS
B	30	1425.0	47.5			

C	30	1335.0	44.5			
Variation among Group medians is significantly greater than expected by chance (P<0.1323)						

Dunn's Multiple Comparisons Test

Group Comparisons	Mean Difference	P	Remarks
A VS B	-3.000	P>0.05	NS
A VS C	0.000	P>0.05	NS
B VS C	-17.000	P>0.001	ES

Comparison of effect of trial drugs on MUCOUS IN STOOL

Kruskal-Wallis Test (Nonparametric ANOVA)

Group	N	Sum of Ranks	Mean of Ranks	KW	P value	Remarks
A	30	1554.5	51.817	9.734	0.0077	NS
B	30	1124.5	37.483			
C	30	1269.0	42.3			
Variation among Group medians is significantly greater than expected by chance (P<0.0077)						

Dunn's Multiple Comparisons Test

Group Comparisons	Mean Difference	P	Remarks
A VS B	0.000	P>0.05	NS
A VS C	4.800	P>0.05	NS
B VS C	4.800	P>0.01	S

Comparison of effect of trial drugs onFLATULENCE:

Kruskal-Wallis Test (Nonparametric ANOVA)

Group	N	Sum of Ranks	Mean of Ranks	KW	P value	Remarks
A	30	1484.5	49.483	7.616	0.0222	CS
B	30	1440.5	48.017			
C	30	1170.0	39.000			
Variation among Group medians is significantly greater than expected by chance (P<0.0222)						

Dunn's Multiple Comparisons Test

Group Comparisons	Mean Difference	P	Remarks
A VS B	9.017	P>0.05	S
A VS C	10.483	P>0.05	NS
B VS C	1.467	P>0.05	NS

Comparison of effect of trial drugs on ODOUR IN STOOL

Kruskal-Wallis Test (Nonparametric ANOVA)

Group	N	Sum of Ranks	Mean of Ranks	KW	P value	Remarks
A	30	1350.0	45.0	0.1319	0.9362	NS
B	30	1395.0	46.5			
C	30	1350.0	45.0			
Variation among Group medians is significantly greater than expected by chance (P<0.9362)						

Dunn's Multiple Comparisons Test

Group Comparisons	Mean Difference	P	Remarks
A VS B	-1.500	P>0.05	NS
A VS C	0.000	P>0.05	NS
B VS C	1.5000	P>0.05	NS

Comparison of effect of trial drugs on AROCHAKA

Kruskal-Wallis Test (Nonparametric ANOVA)

Group	N	Sum of Ranks	Mean of Ranks	KW	P value	Remarks
A	30	1321.5	44.05	0.2410	0.8865	NS
B	30	1408.5	46.95			
C	30	1365.0	45.5			
Variation among Group medians is significantly greater than expected by chance (P<0.9362)						

Dunn's Multiple Comparisons Test

Group Comparisons	Mean Difference	P	Remarks
A VS B	-2.900	P>0.05	NS

A VS C	-1.450	P>0.05	NS
B VS C	1.450	P>0.05	NS

Comparison of effect of trial drugs on BALAKSHAYA

Kruskal-Wallis Test (Nonparametric ANOVA)

Group	N	Sum of Ranks	Mean of Ranks	KW	P value	Remarks
A	30	1305.0	43.5	3.622	0.1635	NS
B	30	1440.0	48.0			
C	30	1350.0	45.0			
Variation among Group medians is significantly greater than expected by chance (P<0.1635)						

Dunn's Multiple Comparisons Test

Group Comparisons	Mean Difference	P	Remarks
A VS B	-4.500	P>0.05	NS
A VS C	-1.500	P>0.05	NS
B VS C	3.000	P>0.05	NS

Comparison of effect of trial drugs on CHINTA

Kruskal-Wallis Test (Nonparametric ANOVA)

Group	N	Sum of Ranks	Mean of Ranks	KW	P value	Remarks
A	30	1315.0	43.5	3.622	0.1635	NS
B	30	1400.0	48.0			
C	30	1355.0	45.0			
Variation among Group medians is significantly greater than expected by chance (P<0.1635)						

Dunn's Multiple Comparisons Test

Group Comparisons	Mean Difference	P	Remarks
A VS B	-4.0	P>0.05	NS
A VS C	-1.5	P>0.05	NS
B VS C	3.0	P>0.05	NS

Comparison of effect of trial drugs on KRODHA

Kruskal-Wallis Test (Nonparametric ANOVA)

Group	N	Sum of Ranks	Mean of Ranks	KW	P value	Remarks
A	30	1231.0	41.033	12.029	0.0024	VS
B	30	1129.0	37.633			
C	30	1735.0	57.833			
Variation among Group medians is significantly greater than expected by chance (P<0.0024)						

Dunn's Multiple Comparisons Test

Group Comparisons	Mean Difference	P	Remarks
A VS B	3.400	P>0.05	NS
A VS C	-16.80	P>0.05	S
B VS C	-20.200	P>0.01	VS

Comparison of effect of trial drugs on SHOKA

Kruskal-Wallis Test (Nonparametric ANOVA)

Group	N	Sum of Ranks	Mean of Ranks	KW	P value	Remarks
A	30	966.5	32.217	20.034	0.0001	ES
B	30	13.67.0	45.567			
C	30	1761.5	58.717			
Variation among Group medians is significantly greater than expected by chance (P<0.0001)						

Dunn's Multiple Comparisons Test

Group Comparisons	Mean Difference	P	Remarks
A VS B	-13.350	P>0.05	NS
A VS C	-26.50	P>0.001	ES
B VS C	-13.150	P>0.05	S

Comparison of effect of trial drugs on VISHADA

Kruskal-Wallis Test (Nonparametric ANOVA)

Group	N	Sum of Ranks	Mean of Ranks	KW	P value	Remarks
A	30	1045.5	34.850			

B	30	1437.0	47.900	13.195	0.0014	VS
C	30	1612.5	53.75			
Variation among Group medians is significantly greater than expected by chance (P<0.1635)						

Dunn's Multiple Comparisons Test

Group Comparisons	Mean Difference	P	Remark
A VS B	-13.050	P>0.05	S
A VS C	-18.900	P>0.01	VS
B VS C	-5.850	P>0.05	S

2. For Quantitative parameters-(Tukey- Kramer multiple Comparisons test)

Comparison of effect of trial drugs on Hb%

Inter group Dunn's Multiple Comparisons Test showed thaton Hb% Group A is statistically Not significant than group B.GroupA is statistically Not significant than group C. Group B is statistically Not significant than group C

Comparison of effect of trial drugs on T LC

Inter group Dunn's Multiple Comparisons Test showed that on TLC, Group A is statistically Not significant than group B.GroupA is statistically Not significant than group C. Group B is statistically Not significant than group C

Comparison of effect of trial drugs on NEUTROPHIL

Inter group Dunn's Multiple Comparisons Test showed thaton Lymphocyte, Group A is statistically Not significant than group B.GroupA is statistically Not significant than group C. Group B is statistically Not significant than group C.

Comparison of effect of trial drugs on EOSINOPHIL

Inter group Dunn's Multiple Comparisons Test showed thaton Eosinophil, Group A is statistically Not significant than group B.GroupA is statistically Not significant than group C. Group B is statistically Not significant than group C

Comparison of effect of trial drugs on MONOCYTES

Inter group Dunn's Multiple Comparisons Test showed that on Monocytes,Group A is statistically Not significant than group B.GroupA is statistically Not significant than group C. Group B is statistically Not significant than group C.

Comparison of effect of trial drugs on S. ALKALINE PHOSPHATE

Inter group Dunn's Multiple Comparisons Test showed thaton S. Alkaline Phosphate, Group A is statistically Not significant than group B.GroupA is statistically Not significant than group C. Group B is statistically Not significant than group C.

Cure rate wise effect of therapy

Group	No.	No relief 0%	Mild 1-25%	Moderate 26-50%	Marked 51-75%	Excellent 76-100%
A	30	0	6 (20.0%)	9 (30.0%)	13 (43.33%)	2 (6.66%)
B	30	0	8 (26.66%)	9 (30.0%)	12 (40.0%)	1 (3.33%)
C	30	0	4 (13.33%)	7 (23.33%)	15 (50%)	4 (13.33%)

Group -A: In this group, 0% patients were of no relief, 20% patients were of mild relief, 30.0% patients were of moderate relief, 43.33% patients were of marked relief and 6.66% were of excellent relief.

Group -B: In this group, 0% patients were of no relief, 26.66% patients were of mild relief, 30.0% patients were of moderate relief,40% patients were of marked relief and 3.33% were of excellent relief.

Group –C: In this group,0% patients were of no relief, 13.33% patients were of mild relief, 23.33% patients were of moderate relief, 50% patients were of marked relief and 13.33% were of excellent relief.

CONCLUSION-

At the verge of completion of present study entitled**"An Epidemiological Study to Ascertain the Psychological Factors in *Agnidushti*with special reference to *GrahaniDosha*and Clinical Trial of *ChitrakadiVati*&*MedhyaVati*"**the final conclusion can be drawn as follows:

CONCEPTUAL:

- Agni keeps the vitality in an individual. It is responsible for the life, complexion, strength, health, enthusiasm, metabolism and luster in an individual. Quality of these factors reflects the state of *Agni* in the individual.
- Disorder of *Agni*is *Mandagni*, *Tikshnagni*and *Vishmagni*. Among these *Mandagni* is mainly responsible for causing *GrahaniDosha*.The basic pathology of *Grahani*is *Agnidushti*,
- *Mano-Aghata*is the cause in the production of vitiation of *Agni* which is also given by *Acharya Charaka* in *Vimana Sthana*chapter2 as the wholesome food taken even in proper

quantity do not get properly digested if the person is in a state of *Chinta* (anxiety), *Shoka* (grief), *Bhaya* (fear), *Krodha* (anger) and *Dukh-ShayyaPrajagare* (else if he sleeps on an uncomfortable bed or remains awake for a long time)."

- The "*Manasika Bhavas*" like - *Kama* (passion), *Krodha* (anger), *Chinta* (anxiety),*Bhaya* (fear), *Shoka*(grief) etc.causes the vitiation of *Dosha* and *Agni* which results in *Agnidushti*. Once *Agnidushti* occurs it results in *Avipaka, Ajirna* and this further damage the *Agni*. *Agnidushti* causes *Shuktapaka* of *Ahara*, it further disturbs the *Agni*. Thus, *Amavisha* produces the *Grahanidosha* and once it happened it further produces the *Amadosha* and vicious cycle starts.
- In modern science, the cardinal features of *Grahani*explained in the clinical text books of *Ayurveda*, have most similarities with clinical features of Irritable Bowel Syndrome (IBS). Irritable Bowel Syndrome (IBS) is a disorder of gastrointestinal tract which prevails in majority of the global population. As modern approach, Stress is the main causative factor which can have impact on health and longevity if not addressed in a timely fashion. Stress can affect every part of digestive system".

CLINICAL STUDY:

- Group A (*ChitrakadiVati*), Group B (*MedhyaVati*) and Group C (*ChitrakadiVati +MedhyaVati*) showed statistically extremely significant result (P=0.0001) onCardinal features of *GrahaniDosha* viz. *Muhur-Muhur Mala Pravritti, Badhha-Mala Pravritti, Drava Mala Pravritti*, Abdominal Pain, Mucous in Stooland on associated symptoms viz. Flatulence, Odour in stool, *Arochaka, Balakshaya* etc.
- Group A (*ChitrakadiVati*)showed statistically very significant results (P=0.0001) on*Manasika Bhava* viz. *Chinta, Krodha*and*Shoka* while extremely significant results (P=0.0001) were found in *Bhaya, Harsha* andin*Vishada.*
- Group B (*MedhyaVati*) and Group C (*ChitrakadiVati +MedhyaVati*)showed statistically extremely significant results (P=0.0001) on *Manasika Bhava* viz. *Chinta, Krodha, Shoka, Bhaya, Harsha* and*Vishada.*
- According to percentage of relief, **Group C**showed better percentage of relief in *Muhurmuhura Mala*

Pravritti(81.05%),*Baddha Mala Pravritti*(70.84%), *Drava Mala Pravritti* (72.62%), Abdominal Pain (65.92%), Mucus in stool (64.48%), Flatulence (57.59%), Odour in stool(50%) *Arochaka* (97.97%), *Balakshaya* (72.62%).

- **In *Manasika Bhava,***according to percentage of relief, **Group C**showed better percentage of relief viz. *Chinta* (77.32%), *Krodha* (59.01%), *Shoka*(74.60%), *Bhaya* (56.63%), *Harsha*(51.72%) and *Vishad*(67.69%). This implies Group C (*ChitrakadiVati+ MedhyaVati)* is better than Group A and Group B. This is due to synergistic effect of both formulations. So, by correcting the "*Manasa Bhava*" and *Agnidushti*, the *Samprapti* of disease disintegrated. The combined effect of both drugs i.e. **Group C (***ChitrakadiVati+MedhyaVati)* improved *Agnidushti* due to *Manasika Bhava*and regained positive mental health in the patients of *Grahanidosha*.
- **On Laboratory parameters, Group A (***ChitrakadiVati)* showed extremely significant result on Hb% (P=0.0003), Lymphocyte (P=0.0008) and Serum alkaline phosphatase (P=0.0001) while **Group B (***MedhyaVati)* showed very significant result on Eosinophil (P=0.0068), and Serum alkaline phosphatase (P=0.0019) while considerable significant result on Neutrophils (P=0.0277)**. Group C (***ChitrakadiVati+MedhyaVati)* showed very significant result on Lymphocyte (P=0.0093) and Neutrophils (P=0.0001). Considerably significant results were found on Eosinophils (p=0.0401), Monocytes (p=0.0006) and Serum alkaline phosphatase (p=0.0001).
- Both the trial drugs are cost effective and easily available.
- No adverse effect was recorded in any of the 90 patients. So, both the trial drugs are safe.
- **With these obtained results it can be concluded that the Group C (*ChitrakadiVati+MedhyaVati)*is very effective in the management of *Grahanidosha*.**

The study is overall concluded that every health-conscious individual should avoid Psychological Factors & maintain the functions of *Agni* and positive mental health, *ChitrakadiVati&MedhyaVati*is much more effective in reducing the sign & symptoms of *GrahaniDosha* and will also help in deriving new conclusions & axioms in the management of *GrahaniDosha*.

RECOMMENDATIONS FOR FUTURE STUDY

- The same study can be conducted with *ParpatiKalpana*.
- The same study can be carried out with large sample size.

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