"A clinical study of Grahani w.s.r. to IBS and its management with Kutajadi Avaleha and Medhya Rasayana"

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ABSTRACT
Grahani is one of the most complicated and pathological state of the digestive system, in which the sufferer sometimes feel that he is completely well and after some days the condition became worsted. Sometimes the doctor and patient both did not understood what is going wrong although all the pathological test are near the normal range. Grahani is correlated in modern science with IBS, although Grahani is not totally like IBS but some sign and symptoms resemble each other.Before chalk out the plan of management and its evaluation, there is need to understand IBS in terms of Ayurveda. Though it is not possible to find an exact synonym of IBS in Ayurveda, some of the disorders definitely have some clinical symptoms which are also observed in the patients of IBS e.g. Vataja & Kaphaja Atisara, Sangraha Grahani, Pravahika, Pakvashayagata Vata. There are a good number of sign and symptoms in Vataja Atisara[1]which are characteristic of IBS: patient is constipated, stool passed in little quantity with sound, pain and froth, slim and cutting pain in anus or increased frequency of watery stool with decreased quantity and associated mucus are also observed in Atisara. In Kaphaja Atisara [2] which clearly indicates sense of incomplete evacuation, is typical of IBS. Thus, there is quite a good relation between some of Atisara and IBS. Grahani is one of most common Psychosomatic disorders.
In this research paper I discuss detail about Grahani in introduction, material and methods, results with supporting figures, discussion, conclusion etc.

I. INTRODUCTION: -
Grahani, which indicates the pathological state of function and integrity of the intestinal tract (mostly small intestine), a particular part of the GI system known as Grahani in Sanskrit. Grahani is the seat of enzymes (agni). Normally, it holds up the food (until it is digested) and releases it from the side after it is digested. But when it is deranged due to weak digestive enzymes, it releases the ingested material even in undigested conditions. Care has been taken to select the formulation as per classical reference having its efficacy on gastrointestinal disorder.

IBS according to Ayurveda can be considered as a disorder where there is a derangement of Vata in Pakvashaya especially of Apana Vayu leading to Symptoms of pain in abdomen & altered bowel habits. Mandagni leads to Dosha Prakopa. The emotions like anger, fear and grief etc. have their own effects on the Agni: Dusti of Manah or Agni leads to Indigestion[3],Shoka, Bhaya etc. cause Vata Prakopa[4].Thus, disturbance in mental health directly affect the gastrointestinal tract. Therefore, a common psychosomatic problem Grahani (Irritable Bowel Syndrome) has been selected for the present study.IBS is conceptualized as a **'Cluster of bowel syndrome**, in which bowel is irritable or hypersensitive to emotional, mechanical, or chemical stimuli. Symptoms of Grahani are described scattered in different context in Ayurvedic classics.**[5]**

Symptoms –
Most of the symptoms go against to that of Grahani e.g. **Jirnejeeryate[6].**
- Bloating increases on empty stomach and relived by taking food
- Cough and dyspnoea (Kasa, Swasa)
- Emaciation (Karshya)
- Oedema (Shun-Padakara) etc.

It is quite nearer to that of Malabsorption Syndrome.
According to Madhav Nidana symptoms of **Sangraha Grahani** are much similar to IBS.
Sangraha Grahani[7]
- Antrakujanam
- Drava, Ghana, Snigdha, picchila,
- Sashabda,Mandavedanam

- Pakshan-Masad-Dashad-Va-Nityam
- Divaprakopa-Ratroshanti
- Durvijneya, Dushchikitsaya,
- Chirakalanubandhini

Thus, there is quite a good similarity between the symptoms of Sangraha Grahani and IBS. The basic difference lies in the etiopathogenesis and seat of the disease.

Kutajadi Avaleha[8] has Deepana, Pachana, Grahi properties and hence it was presumed that it must be effective in (IBS). Medhya Rasayana[9]group of drugs described in ancient literature is the molecular nutrients for the brain, and claimed to relieve mental fatigue, anxiety, and stress at psychological and neuroendocrine level. An effort has been made to synthesize the conceptual basis of IBS in terms of various similar Ayurvedic conditions described in literature. The efficacy of Kutajadi Avaleha and Medhya Rasayana granules have been evaluated in treating Grahani (IBS) on the basis of Brief Psychiatry Rating Scale[10], Hamilton Anxiety Rating Scale[11], Hamilton Depression Rating Scale[12]and Ayurvedic Manasika bhavas[13]along with chief complaints related to disease with encouraging results particularly when Medhya Rasayana is added to the principal therapy – Kutajadi Avaleha.

Aims and Objectives
- To study the conceptual basis of IBS in comparison with various similar Ayurvedic conditions described in literature.
- To elicit the role of Manasika bhavas in the aetiopathogenesis & symptomatology.
- To assess the efficacy of Kutajadi Avaleha on Grahani (IBS).
- To assess the efficacy of Medhya Rasayana on Grahani (IBS) in general and Manasika bhavas in particular.

II. MATERIAL AND METHODS: -
- Patients visiting the OPD and IPD of Kayachikitsa Dept., VYDS AYURVEDIC PG COLLEGE KHURJA BULANSHAHR U.P. fulfilling the criteria had been selected irrespective of their age, sex, religion, etc.
- Routine hematological, urine and stool examination had been carried out in order to rule out any other pathology or to exclude the organic disorders.
- Special research proforma had been prepared and after detail history taking and examination,

selected patients were randomly categorized in two groups.

Criteria for selection of patients: -Rome Criteria 3rd for the diagnosis of IBS
DIAGNOSTIC CRITERIA
- **Rome Criteria 3rd for the diagnosis of IBS**
- Abdominal pain / Discomfort
    - relieved with defecation
    - with change in stool frequency & consistency
- Difficult stool passage
- Sense of incomplete evacuation
- Presence of mucus in stool

Inclusion Criteria
Typical symptoms of Grahani Roga according to Ayurvedic literature as-
Age between 15-75 yrs, Abdominal pain / Discomfort, Relieved with defecation with change in stool frequency & consistency, Difficult stool passage, Sense of incomplete evacuation, Presence of mucus in stool
Exclusion Criteria: -
Age below 15 yrs and Above 75 yrs, Amoebic dysentery, Ulcerative colitis, Malabsorption syndrome, IBD & Intestinal tuberculosis, Lactase deficiency diarrhoea, Malignancy, Hyperthyroidism and Diabetes
Administration of therapy: -100 Patients divided into two equal groups 50 patients in each-
Group A : Kutajadi Avaleha-10 gm B.D. before meal with warm water-45 days
 Group B : Kutajadi Avaleha + Medhya Rasayana Granul- 10 gm B.D. + 5 gm B.D. before meal with warm water s
Duration : 45 days
Follow up:
After the completion of the therapy, patient was advised to visit O.P.D. at every week and the follow up of 1 month

COMPARISION BETWEEN TWO GROUPS: -
Observations and Result: -
- **Group A:** Out of 42 patients, after the completion of treatment with Kutajadi Avaleha, all i.e. 42 (100%) patients were showed mild improvement. None of the patient had complete remission or marked improvement or moderate improvement or unchanged in the group. **Group B:**Out of 38 patients, after the completion of treatment with Kutajadi Avaleha along with Medhya rasayana granules, 11 (28.95%) patients were found in

moderately improved whereas (71.05%) patients were found in mild improvement. None of the patient was found in complete remission or marked improvement or unchanged.The total effect of therapies in both the groups are can be summarized as following:

- **Muhubaddha / Muhudrava Mal pravriti score** - in GP1 the mean Score before treatment was 2.08 which lowered down to 0.74 after treatment, with SD±0.48 giving a relief of 64.18% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.41 which lowered down to 0.66 after treatment, with SD±0.67 giving a relief of 72.73% which was statistically extremely significant (P<0.0001). **Udarshool Score**-in GP1, the mean Score before treatment was 1.69 which lowered down to 0.72 after treatment, with SD±0.33 giving a relief of 57.13% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.12 which lowered down to 0.54 after treatment, with SD±0.50 giving a relief of 74.56% which was statistically extremely significant (P<0.0001).**Udargaurav Score**-in GP1, the mean Score before treatment was 1.97 which lowered down to 0.79 after treatment, with SD±0.46 giving a relief of 59.67% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.06 which lowered down to 0.63 after treatment, with SD±0.56 giving a relief of 69.70% which was statistically extremely significant (P<0.0001).

- **Apachan Score**-in GP1, the mean Score before treatment was 1.92 which lowered down to 0.89 after treatment, with SD±0.16 giving a relief of 53.52% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.26 which lowered down to 0.58 after treatment, with SD±0.55 giving a relief of 74.27% which was statistically extremely significant (P<0.0001). **Aruchi Score-**in GP1, the mean Score before treatment was 1.84 which lowered down to 0.89 after treatment, with SD±0.23 giving a relief of 51.46% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.23 which lowered down to 0.71 after treatment, with SD±0.51 giving a relief of 67.97% which was statistically

extremely significant (P<0.0001). **Atopa Score-**in GP1, the mean Score before treatment was 1.97 which lowered down to 0.97 after treatment, with SD±0.24 giving a relief of 50.74% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.36 which lowered down to 0.77 after treatment, with SD±0.50 giving a relief of 67.13% which was statistically extremely significant (P<0.0001). **Vidaha Score**-in GP1, the mean Score before treatment was 1.81 which lowered down to 0.84 after treatment, with SD±0.31 giving a relief of 53.58% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.10 which lowered down to 0.57 after treatment, with SD±0.51 giving a relief of 73.00% which was statistically extremely significant (P<0.0001). **Alasaya Score-**in GP1, the mean Score before treatment was 1.94 which lowered down to 0.81 after treatment, with SD±0.34 giving a relief of 58.35% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.03 which lowered down to 0.55 after treatment, with SD±0.51 giving a relief of 72.91% which was statistically extremely significant (P<0.0001). **Vishtambh Score**-in GP1, the mean Score before treatment was 1.92 which lowered down to 0.92 after treatment, with SD±0.24 giving a relief of 52.11% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.18 which lowered down to 0.59 after treatment, with SD±0.50 giving a relief of 72.98% which was statistically extremely significant (P<0.0001).

- **Praseka Score-** in GP1, the mean Score before treatment was 1.89 which lowered down to 0.95 after treatment, with SD±0.33 giving a relief of 49.99% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.29 which lowered down to 0.64 after treatment, with SD±0.49 giving a relief of 71.87% which was statistically extremely significant (P<0.0001).**Abdominal pain and discomfort Score-** in GP1, the mean Score before treatment was 1.69 which lowered down to 0.72 after treatment, with SD±0.33 giving a relief of 57.13% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.40 which

lowered down to 0.66 after treatment, with SD±0.67 giving a relief of 72.73% which was statistically extremely significant (P<0.0001).**Constipation /diarrhoea/both Score-** in GP1, the mean Score before treatment was 2.08 which lowered down to 0.74 after treatment, with SD±0.48 giving a relief of 64.19% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.12 which lowered down to 0.54 after treatment, with SD±0.50 giving a relief of 74.56% which was statistically extremely significant (P<0.0001).**Difficulty in stool passing Score-** in GP1, the mean Score before treatment was 2.06 which lowered down to 0.91 after treatment, with SD±0.36 giving a relief of 55.67% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.06 which lowered down to 0.63 after treatment, with SD±0.56 giving a relief of 69.70% which was statistically extremely significant (P<0.0001).**Sense of incomplete evacuation Score--** in GP1, the mean Score before treatment was 2.03 which lowered down to 0.66 after treatment, with SD±0.49 giving a relief of 67.57% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.26 which lowered down to 0.58 after treatment, with SD±0.54 giving a relief of 74.27% which was statistically extremely significant (P<0.0001).

- **Presence of mucous in stool Score-**in GP1, the mean Score before treatment was 2.03which lowered down to 0.89 after treatment, with SD±0.48 giving a relief of 55.87% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.23 which lowered down to 0.71 after treatment, with SD±0.51 giving a relief of 69.92% which was statistically extremely significant (P<0.0001).**Gas and flatulence Score-** in GP1, the mean Score before treatment was 1.70 which lowered down to 0.60 after treatment, with SD±0.38 giving a relief of 64.71% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.36 which lowered down to 0.77 after treatment, with SD±0.50 giving a relief of 67.13% which was statistically extremely significant (P<0.0001).

- **Dyspepsia Score-**in GP1, the mean Score before treatment was 1.97which lowered down to 0.91 after treatment, with SD±0.34 giving a relief of 53.63% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.10 which lowered down to 0.57 after treatment, with SD±0.51 giving a relief of 73.00% which was statistically extremely significant (P<0.0001).**Heart burn Score--** in GP1, the mean Score before treatment was 1.95 which lowered down to 0.83 after treatment, with SD±0.40 giving a relief of 57.69% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.03 which lowered down to 0.55 after treatment, with SD±0.51 giving a relief of 72.91% which was statistically extremely significant (P<0.0001).**Nausea and vomiting Score--** in GP1, the mean Score before treatment was 1.82 which lowered down to 0.87 after treatment, with SD±0.40 giving a relief of 52.17% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.18 which lowered down to 0.59 after treatment, with SD±0.50 giving a relief of 72.98% which was statistically extremely significant (P<0.0001).

- **Dhairyam Score-**in GP1, the mean Score before treatment was 2.43 which lowered down to 1.63 after treatment, with SD±0.48 giving a relief of 32.88% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.41 which lowered down to 1.28 after treatment, with SD±0.35 giving a relief of 47.14% which was statistically extremely significant (P<0.0001).**Dhriti Score-** in GP1, the mean Score before treatment was 2.42 which lowered down to 1.77 after treatment, with SD±0.59 giving a relief of 27.05% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.70 which lowered down to 1.27 after treatment, with SD±0.50 giving a relief of 52.79% which was statistically extremely significant (P<0.0001). **Harsha Score-**in GP1, the mean Score before treatment was 2.37 which lowered down to 1.57 after treatment, with SD±0.47 giving a relief of 33.74% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.71 which lowered down to 1.39 after treatment, with

SD±0.48 giving a relief of 48.81% which was statistically extremely significant (P<0.0001).**Priti Score**- in GP1, the mean Score before treatment was 2.41 which lowered down to 1.68 after treatment, with SD±0.45 giving a relief of 30.49% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.69 which lowered down to 1.31 after treatment, with SD±0.49 giving a relief of 51.15% which was statistically extremely significant (P<0.0001).**Viryam Score** in GP1, the mean Score before treatment was 2.52 which lowered down to 1.36 after treatment, with SD±0.37 giving a relief of 46.15% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.73 which lowered down to 1.33 after treatment, with SD±0.50 giving a relief of 51.23% which was statistically extremely significant (P<0.0001).**Shradha Score-** in GP1, the mean Score before treatment was 2.55 which lowered down to 1.42 after treatment, with SD±0.34 giving a relief of 44.34% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.59 which lowered down to 1.38 after treatment, with SD±0.42 giving a relief of 46.99% which was statistically extremely significant (P<0.0001).**Medha Score-** in GP1, the mean Score before treatment was 2.49 which lowered down to 1.51 after treatment, with SD±0.60 giving a relief of 39.14% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.73 which lowered down to 1.33 after treatment, with SD±0.50 giving a relief of 51.12% which was statistically extremely significant (P<0.0001).

- **Bhaya Score--** in GP1, the mean Score before treatment was 1.86 which lowered down to 1.19 after treatment, with SD±0.96 giving a relief of 35.82% which was statistically extremely significant (P<0.0006). In GP2, the mean Score before treatment was 1.77 which lowered down to 0.43 after treatment, with SD±0.64 giving a relief of 75.83% which was statistically extremely significant (P<0.0001).**Krodha Score**-in GP1, the mean Score before treatment was 1.84 which lowered down to 0.62 after treatment, with SD±0.42 giving a relief of 66.16% which was statistically extremely significant (P<0.0001).

In GP2, the mean Score before treatment was 2.12 which lowered down to 0.56 after treatment, with SD±0.50 giving a relief of 73.66% which was statistically extremely significant (P<0.0001).**Shoka Score-** in GP1, the mean Score before treatment was 2.00 which lowered down to 1.02 after treatment, with SD±0.47 giving a relief of 48.78% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.17 which lowered down to 0.72 after treatment, with SD±0.50 giving a relief of 66.63% which was statistically extremely significant (P<0.0001).**Dvesha Score-** in GP1, the mean Score before treatment was 1.94 which lowered down to 0.78 after treatment, with SD±0.38 giving a relief of 60.03% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.09 which lowered down to 0.53 after treatment, with SD±0.72 giving a relief of 74.64% which was statistically extremely significant (P<0.0001).**Rajah Score-** in TG_I, the mean Score before treatment was 1.97 which lowered down to 1.05 after treatment, with SD±0.60 giving a relief of 46.57% which was statistically extremely significant (P<0.0001). In TG_{II}, the mean Score before treatment was 2.18 which lowered down to 0.71 after treatment, with SD±0.76 giving a relief of 47.49% which was statistically extremely significant (P<0.0001).**Vishada Score-** in GP1, the mean Score before treatment was 1.95 which lowered down to 1.18 after treatment, with SD±0.53 giving a relief of 39.74% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.06 which lowered down to 0.55 after treatment, with SD±0.56 giving a relief of 72.96% which was statistically extremely significant (P<0.0001).

- **Moha Score-** in GP1, the mean Score before treatment was 1.74 which lowered down to 1.05 after treatment, with SD±0.57 giving a relief of 39.39% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 1.95 which lowered down to 0.51 after treatment, with SD±0.50 giving a relief of 73.59% which was statistically extremely significant (P<0.0001).**Chinta Score-** in GP1, the mean Score before treatment was 2.05 which lowered down to 1.39 after treatment, with

SD±0.60 giving a relief of 32.14% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.09 which lowered down to 0.58 after treatment, with SD±0.57 giving a relief of 72.45% which was statistically extremely significant (P<0.0001).

- **Hamilton's anxiety rating scales--**in GP1, the mean Score before treatment was 1.84 which lowered down to 0.78 after treatment, with SD±0.63 giving a relief of 57.65% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 1.97 which lowered down to 0.50 after treatment, with SD±0.73 giving a relief of 74.54% which was statistically extremely significant (P<0.0001).

- **Hamilton's depression rating scales--**in GP1, the mean Score before treatment was 2.09

which lowered down to 0.79 after treatment, with SD±0.58 giving a relief of 61.97% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.19 which lowered down to 0.54 treatment, with SD±0.86 giving a relief of 73.33% which was statistically extremely significant (P<0.0001).

- **Brief psychiatric rating scales--**in GP1, the mean Score before treatment was 1.94 which lowered down to 0.71 after treatment, with SD±0.55 giving a relief of 63.63% which was statistically extremely significant (P<0.0001). In GP2, the mean Score before treatment was 2.13 which lowered down to 0.66 after treatment, with SD±0.67 giving a relief of 69.13% which was statistically extremely significant (P<0.0001).

Table 1:-

Effect of Therapy	Number of Patients			
	Group A		Group B	
	No. of patients	%	No. of patients	%
Complete Remission (100% Relief	0	0 %	0	0
Marked Improvement (75 - <100%) Relief	0	0 %	0	0
Moderate Improvement (50 - < 75%) Relief	0	0 %	11	28.95 %
Mild Improvement (25 - <50 %) Relief	42	100 %	27	71.05 %
Unchanged (<25%) Relief	0	0 %	0	0

III. SUMMERY AND CONCLUSION: -
On the basis of this study, it can be concluded that-

- Grahani has strong psycho-somatic base as Manasik bhava like Shoka, Chinta, Bhaya etc. are observed to be playing a vital role in the etiopathogenesis and exacerbation of the disease. Hence the type of drug/therapy should be recommended in such a way so that it can pacify these disturbed Manasik bhava acting as stressor to correct the deranged psychosomatic set up, resulting in regulating the bowel motility.In nut shell, Grahani (which includes some of the clinical features described under Vataja- Kaphaja Atisara, Sangraha Grahani, Pravahika & Pakvashayagata Vata) can be managed by mental health promoting drugs like Medhya rasayana when added to the principal drugs like Kutajadi Avaleha, since triggering factor for the disease Tension, Anger, Fear, Grief etc. can be tackled better by such drugs.Among the two, combined therapy was

found better than other one. In statistical terms, the improvement obtained in both the groups was almost same.

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