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Clinical Effect of *Madhu Amalaki Rasayan* (MAR) in the Treatment of *Amlapitta*. W. S. R. to Acid Peptic Disorders

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Abstract

Amlapitta is a very common disease which can be correlated with Acid peptic disorder (APD) in modern parlance. In Ayurveda the main cause of *Amlapitta* is due to *Agnimandya* (Indigestion), different dietetic habits like *Adhyashan (Intake of food before digestion)*, *Vishmashana (Irregular food intake) and spiced oily food etc. and the psychic factors like Chinta (anxiety) Udveg (Stress), Krodha (Anger) etc*. In modern the causative factors are mainly hurry, worry and curry adding new sherry (Alcohol) and mechanical lifestyle with unsuitable food habits. The disease became chronic due to negligence and western life style adopting in diet and routine activity which is nonconductive regimen in our Indian climate. In this study 80 patients of *Amlapitta* were selected and divided into two groups. In group-A (Treated group) 50 patients were treated with Ayurveda formulation tablet *Madhu Amalaki Rasayan* (MAR) 250 mg two times a day before meal. In group-B (Control group) 30 patients were treated with modern medicine i.e. tablet famotidine-20 mg two times a day before meal. The treatment was continued for consecutive 30 days in both groups and patients were followed up for further two months by every fortnight. Lastly study concluded that tablet *Madhu Amalaki Rasayan* (MAR) is better as a remedial measure for Amlapitta having good palatability without any adverse effect.

Keywords: *Amlapitta*; Acid Peptic Disorders; Ayurveda; Famotidine; *Madhu Amalaki Rasayan*.

Introduction

Amlapitta is a very common disease caused by *Vidagdha Pitta* with the clinical features like *Amlodgara*, *Urodaha, Udarshoola, chhardi,* etc. It is a burning problem of the whole world due to the irregular and improper food habits, busy as well as stressful life style. Many definitions have been quoted in the classics of *Ayurveda* regarding *Amlapitta*. According to *Vijayarakshita commentator* of *Madhava Nidana Amlapitta* means - the *Pitta* which attains excessive *Amlata (Sourness)* because of *Vidagdha Paka (Disturbed Metabolic Enzyme)* is called *Amlapitta.* It seems to be appropriate as per Nidan (pathology). In Ayurveda brahadtrayee, there is no direct reference of *Amlapitta*. *Amlapitta* as a separate status of disease entity has been first mentioned in the Kashyapa Samhita where he has counted the Manasika Bhavas (Psychological factors) as the chief causative factors of the disease, similar to modern point of views. He has also analyzed the disease on the basis of *Doshika* predominance in the angle of pathogenic factors that the disease is caused by vitiation of *Tridoshas* leading to *Mandagni* and *Amlapitta* [1]. Whereas Madhavakara in Madhav Nidana, has explained the main role of Pitta dosha vitiation in the pathogenesis of the disease [2]. He has described the two *Gatis (Movements)* of *Amlapitta* as *Urdhvaga (Upward)* and *Adhoga (Downward)* which provides the guidelines for the treatment. Regarding the remedy, the authors of Kashyapa Samhita, Chakradutta, *Bhaishajya Ratnavali* have elaborated the line of the treatment like *Shodhana (Purification)* and *Shamana (Subsiding/Relieving)* therapies. *Shodhana* mainly includes *Vamana (Vomiting)* and *Virechana (Purgation),* but *Niruha basti* and *Anuvasana basti* are prescribed in some special conditions. *Shamana* therapy mainly involves the use of *Tikta (Bitter)*, *Madhur*a (Sweet) *Rasa (Taste) Pradhana (Dominant)* drugs. Other authors also have mentioned many compound medicines for its treatment. However innovative thoughts have been taken to

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explore a new contribution on remedy to this particular challenging field.

Acid peptic disorders are pathogenic mechanisms leading to either excessive acid secretion or diminished mucosal defense [3]. They are common entities present in daily clinical practice which are chronic in nature. APD-Acid peptic disease is the result of damage from acid and pepsin activity in the gastric secretion. The histamine-2 receptor antagonists and proton-pump inhibitors (PPIs) are used for the treatment of acid peptic disorders [4]. Moreover, PPIs reduce, but do not eliminate, the risk of ulcers in patients taking NSAIDs, reflecting untargeted physio pathologic pathways [5]. On the basis of sign and symptoms the *Amlapitta* can be correlated with acid peptic disorders in modern parlance. The palatable remedy is available in modern medicine whereas complete remedy is available in Ayurveda. Now-a-days patient inspired to search the existing herbal, herbo-mineral, and combination of Ayurveda drugs and compound medicines which have encouraged finding out an innovative formulation of herbo-mineral compound processed medicine instead of modern drugs. Though the use of drugs has been described in classics in crude form but it is converted into tablet form for better palatability and acceptability. In this context the author *Kashyapa* has also contra-indicated the prescription of Drava *Aushadhi* (Liquid Medicines) in the treatment of *Amlapitta* [6]. Hence considering the above fact this study has been planned with following aim and objective.

Aim and Objective

To evaluate the clinical effect of *Madhu Amalaki Rasayan* (MAR) in the treatment of *Amlapitta*. W. S. R. to APD

Materials and Methods

Total 80 patients were selected from OPD and IPD of GAM, Puri irrespective of age, sex, occupation, religion and were divided into two groups.

Group-A (Treated group): 50 patients were treated with 250mg tablet of *Madhu Amalaki Rasayan* (MAR) two times a day (bid) in empty stomach for 30 days.

Group-B (Control group): 30 patients were treated with 20mg tablet of Famotidine two times a day (bid) in empty stomach for 30 days.

Follow-up: Two Months

Preparation of *Madhu Amalaki Rasayan* (MAR).

Formulations: All the drugs are taken in equal quantity and tablet is made up of 250 mg.

Ingredients

1. *Yasthimadhu* (*Glycyrrhiza glabra*)
2. *Saunp* (Funnel) (Foeniculum Vulgare Mill)
3. *Jirak* (Cumin seed) (Cuminum Cyminum)
4. *Amalaki* (*Emblic myrobalan*) (Emblica officinalis)
5. *Lavang* (Clove) (Syzygium aromatium)
6. *Sunthi* (Dry ginger) (Zingiber officinal)
7. *Satavari* (*Asparagus racemosus*)
8. *Gudatwaka (*Cinnamon)(Cinnmomnm Zeylanicum)
9. *Abhraka bhasma (Mica Ashes)*
10. Lauh Bhasm (Iron ashes)

All above herbal cleaned drugs are taken and made grinding with sieving for fine powder. Then Abhra Bhasm, and Louha Bhama are added. Next this herbo-mineral mixture is properly vehicled (*Mardan)* with raw *Amalaki* juice. When this compound becomes, semisolid tablet form, then tablet is prepared and kept for drying in room temperature. The tablet is prepared completely under the pharmacy manufacturing guide lines and packed with manufacturing date etc., for standard use.

Method of Administration

250mg tablet of MAR two times a day (BID) in empty stomach followed by 12 hours funnel soaked water for consecutive 30 days.

1. Patients suffering from *Amlapitta* or symptoms similar to APD
2. Patients of age group 16-60 years of age
3. Initial stage of gastric ulcer and duodenal ulcer
4. Dyspepsia

Exclusion Criteria

1. Perforated peptic ulcer
2. Carcinoma of stomach
3. Cases of gastrojejunstomy
4. Esophagus reflux
5. Chronicity more than 6 years

Investigations

1. Hematological: TLC, DLC, ESR, Hb%

2. Biochemical investigations: Blood sugar, Blood urea, serum creatinine, Lft,
6. Barium meal X-ray for stomach and duodenum (whenever necessary)
7. Gastroduodenoscopy in suspected cases of carcinoma
8. Urine Routine and Microscopic examination
9. Stool Routine, Microscopic specifically for occult blood

Scoring Pattern

Urodaha (Burning sensation in thorax)

0. No *Daha*
1. *Daha* occurs daily for half hour to one hour
2. *Daha* occurs daily more than one hour and relieves after digestion of food or vomiting.
3. *Daha* involving most of the areas and does not relieve by any measures.

Amlodgara (erructations)

0. No *Amlodgara*
1. *Amlodgara* occurs daily for 2-3 times and relieved by sweets, water and antacids
2. *Amlodgara* after every intake of meal and relieved by digestion of food or vomiting
3. *Amlodgara* for more than one hour not relieved by any measure.

Udarshoola (Epigastric pain)

0. No pain
1. Pain (epigastric) for less than one hour and relieved after intake of sweets, antacid, milk etc.
2. Epigastric pain due to ingestion of food and relieves after digestion of food or by vomiting.
3. Severe unbearable pain which does not subside by any measure.

Chhardi (Vomiting)

0. No vomiting
1. Feels sense of nauseating and vomits occasionally
3. Frequency of vomiting is 2-3 times or more per weeks and comes whenever *Daha* or pain or vomiting after every meal or even without meal.

Adhmana (Flatulence)

0. No *Adhmana*
1. Occasionally feelings of distension of abdomen
2. Moderate distension of abdomen up to 6 hours after intake of food
3. Severe distension of abdomen up to more than 6 hrs after intake of food

Aruchi (Anorexia)

0. Willing towards all diet
1. Unwilling towards some specific *Rasa* i.e. *Katu* / *Amla* / *Madhur* food
2. Unwilling for food but could take the meal
3. Totally unwilling for meal

Assessment of overall effect of therapy

Complete cured:	100%
Marked improvement:	76-99%
Moderate improvement:	51-75%
Mild improvement:	26-50%
Unchanged:	0-25%

Observations

Demographic Data

Table 1: Age n=80

Age	Group-A	Group-B	Total
16-30	8	2	10
30-45	25	13	38
45-60	17	15	32

Table 2: Sex n=80

Sex	Group-A	Group-B	Total
Male	28	16	45
Female	22	14	36

Table 3: Occupation n=80

Occupation	Group-A	Group-B	Total
Labor work	12	8	20
Farmer	8	6	14
Service	5	4	9
House wife	20	11	31
Students	5	1	6

Table 4: Socio-Economic Status n=80

Socio-Economic Status	Group-A	Group-B	Total
Rich	8	3	11
Middle class	22	16	38
Poor	20	11	31

Table 5: Chronicity n=80

Chronicity	Group-A	Group-B	Total
½ -1 years	10	7	17
1-2 Years	22	10	32
2-4 Years	9	9	18
4-6 Years	9	4	13

Table 6: Diet nature n=80

Diet	Group-A	Group-B	Total
Vegetarian	13	12	25
Mixed	37	18	55

Table 7: *Rasa Pradhanya* n=80

Rasa in Diet	Group-A	Group-B	Total
Madhura	4	4	8
Amla	6	2	8
Lavan	12	8	20
Katu	20	12	32
Tikta	4	1	5
Kashaya	2	1	3

Table 8: Dietetic Habits n=80

Dietetic Habits	Group-A	Group-B	Total
Adhyashana	25	13	38
Vishamashana	15	11	26
Virudhashana	10	6	16

Table 9: Addiction n=80

Addiction	Group-A	Group-B	Total
Tobacco	16	12	28
Smoking	20	13	33
Alcohol	10	14	24
Tea	40	20	60

Table 10: *Prakriti* n=80

Prakriti	Group-A	Group-B	Total
Vatapitta	26	14	40
Pittakapha	14	12	26
Vatakapha	10	4	14

Table 11: *Koshtha* n=80

Koshtha	Group-A	Group-B	Total
Mrudu	11	9	19
Madhyama	24	11	35
Krura	15	10	25

Table 12: *Agni* n=80

Agni	Group-A	Group-B	Total
Manda	27	15	42
Tikshna	10	6	16
Vishama	13	9	22

Table 13: Bowel habit n=80

Bowel habit	Group-A	Group-B	Total
Regular	5	2	7
Irregular	22	16	38
Drava	8	3	11
Grathita	15	9	23

Table 14: Chief complaints n=310

Chief complaints	Group-A	Group-B	Total
Urodaha	45	25	70
Amlodgara	41	20	61
Udarashoola	30	22	52
Chhardi	15	5	20
Adhmana	40	23	73
Aruchi	20	14	34

Overall Result

1. Completion of the study, the total cured- 47 cases,
2. Improvement in sign and symptoms >75% - 19 cases,
3. Improvement in sign and symptoms 25% to 50%, -10 cases
4. Improvement in sign and symptoms < 25% -4 cases,

Discussion

Age: The maximum (38) patients were observed in age group of 30-45 years, as this age group having more family responsibility and more prey for junk food, faulty irregular dietary habits. The instability and struggle for upcoming into the social scenario may lead to stress and strain resulting to anxiety and further worry is a major causative factor for *Amlapitta* (Table 1).

Sex: More incidences (67) were observed in male patients. It might be due to family tensions, job tensions and also more family responsibility. The males are more addicted to tobacco and smoking. It has been observed that it is more in male, in comparison to female which leads to *Amlapitta* (Table 2).

Occupation: The majority of the patients (31) were housewives. It can be opined that women have to take more care for whole family, management of daily house works, tensions about children future, also their sedentary life style, lack of exercise, faulty diet habits of *Adhyashana*, *Diwaswapa (Day Sleep)* may lead to *Amlapitta* (Table 3).

Socio-Economic Status: Maximum numbers of patients (38) were from middle class followed by poor class (31) as the flow of patients to govt. hospital is from this class. Another reason might be because of stress induced by the struggle to become upper class (Table 4).

Chronicity: It was recorded that majority of patients (32) were having chronicity of disease 1-2 years which indicate the chronic nature of the disease. It

might be due to the sensitivity of the problem of the disease (Table 5).

Diet: Maximum number of patients (55) were mixed type of diet i.e. vegetarians as well as non vegetarians, might be due to local food habits of the study centre. As non vegetarian diet is guru (Heavy) in nature and may not be properly cooked and also spicier (Included chilies, pickles, fried, oily items etc) lead to acid peptic disorders. Due to such type of intake of diet causes *Agnimandya (Indigestion)* which gives rise to such type of diseases (Table 6).

Rasa Pradhanya in Diet: Maximum patients consume *Katu* (Pungent) and Spicy Rasa (32) followed by *Lavana* (Salty) Rasa (20) in their diet. These *Rasas* are responsible for the irritation of the mucus membrane and cause mucosal disturbances leads to APD (Table 7).

Dietetic Habits: Adhyashana was observed in maximum patients (38) followed by *Vishamashana* (26). *Author of medicine, Charaka* has advised to take the food only after the previous meal is digested, otherwise it may cause aggravation of *Doshas*, due to the unconsumed food and insufficient rest to the stomach, the mucous membranes would be hampered, leading to local damage. In many urbanized civilization cities about almost all people have to work in the Industries / Companies, for their livelihood, hence maintaining of hurry, worry and tense full life becomes their habit. Hurry is also mentioned one of the causes to disturb the physiology of stomach leading to APD. Similarly, irregular diet habit is one of etiological factors of *Doshprakopa* and leading to *Amlapitta* (Table 8).

Addiction: Addiction for tea was observed in 60 patients followed by smoking in 33 patients while tobacco chewing was noted on 28 patients. All these addiction factors exhibit *Ushna*, *Tikshna*, *Pittaprakopaka* properties. These products also cause irritation to esophageal, gastric or intestinal mucosa leading to *Amlapitta*. The decrease tone of lower esophageal sphincter, also leads to the disease APD (Table 9).

Prakriti: *Vatapitta Prakriti* was found in majority of patients (40) while *Pittakapha prakriti* was seen in 26 patients, which indicates that these *Prakriti*s are more prone to the disease *Amlapitta* (Table 10).

Koshtha: *Madhyama Koshtha* was observed in 35 cases followed by *Krura Koshtha* in 25 patients. This may be due to aggravated *Vata* and *Krura Koshtha* are more prone to constipation, which leads to delayed emptying, and it attends shuktata, that leads to *Amlapitta* (Table 11).

Agni: *Mandagni* was observed in 42 patients. It is a classical etiological factor of *Amlapitta* which further leads to *Ajirna tending to shuktata and Amlapitta* (Table 12).

Bowel Habit: In this study irregular bowel habit was noted by maximum 38 patients and hard stool was observed in 23 patients. The irregular bowel and hard stool, both are causative factors to disturb the GIT function and responsible for APD / *Amlapitta* (Table 13).

Overall Effect of the Therapy

Urodaha: In this present study, the average effect of the therapy on symptoms like *Urodaha* in Group-A showed 80.23% improvement stated to be statistically highly significant while in Group-B it showed 50.14% improvement which was only statistically significant. *Daha* is specific symptom (*Pratyatma lakshana*) of vitiated *Pitta dosha*. The ingredients of the tablet MAR are *Yasthimadhu*, *Amalaki, Satavari* which are mainly having *Madhura Rasa* and *Madhura Vipaka,* so they may have reduced the *Tikshanata* of *Pitta*, resulting in reduction of the symptom *Daha*. [7] *Yasthimadh, Abhra Bhsma and lauhBhasm are* said to be healing in ulcers having *Ropana (Healing)* properties. In patients of Group-A (Tab. MAR) better symptomatic relief was observed in *Urodaha* as compared to Group-B (Tab. Famotidine). It might be due to the effect of all *Pittashamaka* ingredients present in the trial drug- MAR.

Amlodgara: The average effect of the therapy on *Amlodgara*, *Tiktaudgara*, *Katuudgara* in Group-A and Group-B was recorded as 81% and 60% respectively. *Amlodgara* may occur due to *Ajirna*, *Ama* formation, *Samapitta*, and *Agnimandya*. The ingredients of the drug present in MAR in Group-A like *Sunthi, Amalaki* having *Agnideepana (Stimulant)*, *Amapachana (Stomachic)* properties, by which they may convert the *Sama Pitta* to *Niramavastha* and reduce the tendency of *Udgara*. *Udgara (Nausea)* may be produced due to *pratiloma gati* of *Vata dosha*. The ingredients like *Saunp*, and Jirak are also having *Vatanulomana* property which may reduce *udgara* [8-9].

Udarashoola: Percentage of relief in *Udarashoola* in Group-A and Group-B was noted as 70.66% and 65% respectively. Group-A (trial group) showed statistically highly significant results. *Udarashoola* might be relieved due to the *Ushna virya* and carminative properties of *Saunp, Jirak, Lavang,and Sunthi* present in the tablet- MAR. Due to these properties they cause *Vatanulomana* and reduced *Shoola (Pain)*. *Yasthimadhu* is also having anti-gastric, anti-ulcer, anti-inflammatory properties, so it helped in the reduction of local mucosal congestion and ultimately relief in *Udarshoola* [10].

Adhaman: The relief in the symptom *Adhaman* was stated 96% in group-A while 71% in group-B. The

ingredients present in the tablet MAR, like *Saunp*, and Jirak have *Vatanulomana* properties where as *Sunthi,* and *Amalaki* having *Agnideepana*, *Amapachana* properties which helped in the relief of symptom *Adhaman* in better way as compared to famotidine. [11]

Chhardi: The effect of the therapy on *Chhardi* was stated as 82% and 72% in Group-A and group-B respectively which were statistically highly significant in both the groups. The patients of Group-A showed better results than patients of group- B. It might be due to *Kapha Shamaka* property of *Lavang* and *Sunthi. Due to Deepan and Pachan* properties of these ingredients they absorbed excessive *Dravata* of *Pitta* and *Kapha. Chhardi* was not observed in more patients so both the groups showed good results in relieving *Chhardi.*

Aruchi: The percentage of improvement in *Aruchi* in Group-A and Group-B was marked 90% and 81% respectively which were statistically highly significant in both the groups. The patients treated with Group-A showed better result than Group-B due to the ingredient like *Sunthi and Amalaki* which has *Agnideepana*, *Amapachana* properties [12]. The ingredients like *Saunp*, and *Jirak* are also having *ruchivardhak* in the compound MAR.

Conclusion

Amlapitta with special reference to Acid peptic disease is a major gastro intestinal problem which is having high prevalence in the present population due to mainly adoption of unsuitable regimen and mechanical life style. The present study of Madhu Amalaki Rasayan showed highly significant result without any adverse effect, because, the ingredients present in the formulation are having *Deepana, Pachan Anuloman, Pittasaman, Sothaghn* and *Ropana* properties which activate the innovative drug to release the relieving factors for the disease. It does not only limit its actions to relief the symptoms, but also extends to regulate the acid secretions by which supports to cure the disease.

References

1. Pt. Hemraja Sharma, Vidyotini Hindi commentary, Kashyapa Samhita, Khilsthan16/6. Chaukhamba Sanskrit Sansthan, Varanasi. (2009): p.335.
2. Madhavanidan, Madhavacharya, Madhukosha commentary by Acharya Yadunandana Upadhya, Chaukhamba Pakashan, Varanasi. (2004): part 2,51/1, p.17.
3. Schubert ML, Pecura DA. Control of gastric acid secretion in health and disease. Gastroenteroly 2008.134:1842-1860.
4. Anonymous. American Gastroenterological Association Medical Position Statement: Evaluation of Dyspepsia. Gastroenterology. 2005; 129: 1753-1755.
5. Alex M, Walter KK. Acid peptic diseases: pharmacological approach to treatment. Expert Rev Clin Pharmacol. May 2009; 2(3): 295-314.
6. Pt. Hemraja Sharma, Vidyotini Hindi commentary, Kashyapa Samhita, Khilsthan 16/6. Chaukhamba Sanskrit Sansthan, Varanasi. (2009): p.337.
7. Banani D, Debajyoti D, Jayram H. Clinical effect of Amalaki Churna and Muktasukti Bhasma in Amlapitta (Non-ulcer dyspepsia). Published in Research Gate https://www.researchgate.net/publication/254558664 Accessed on 23.1.2015.
8. Johri RK. *Cuminum cyminum* and *Carum carvi*: An update. Pharmacognosy Review. 2011; 5(9): 63-72.
9. Thomson Coon J, Ernst E. Systematic review: Herbal medicinal products for non-ulcer dyspepsia. Aliment Pharmacol Ther. 2002; 16: 1689-99.
10. Saxena Sanjai. *Glycyllerhiza glabra:* Medicine over the millennium. Natural Product Radiance.2005; 4(5): 358-367.
11. Traditional Herbal Remedies for Primary Health Care. http://herbalnet.healthrepository.org/bitstream/123456789/2287/26/herbal_remedies_phc_1-42.pdf Accessed on 23.1.15.
12. Ghosh AK, Banerjee S, Mullick HI, Banerjee J. *Zingiber officinale*: A natural gold International Journal of Pharma and Bio Sciences. 2011; 2(1): 283-294.