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THE EFFECT OF *AMALAKI* AS *PATHYA* IN *AMLAPITTA* (HYPERACIDITY)"

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ABSTRACT

The altered life-style pattern like fried food, night shifts, mental stress, addictions etc. is the major risk factors for *Amlapitta*. Medicine alone cannot bring the desired therapeutic effect without *Pathya* (wholesome diet). Hence, objective of the present study was to evaluate the effect of *Amalaki* (Emblica officinalis) as *Pathya* in *Amlapitta*. Fourty subjects fulfilling the diagnostic and inclusion criteria were randomly selected and divided in 2 groups. In group A - *Amalaki Churna* (5gm) was given thrice daily, just before food mixed with water for 1 month. In group B Placebo (Ragi flour) given in the same dose and manner for one month. Subjects were advised the usage of Routine diet with limited use of spice & salt. Clinical signs and symptoms were given suitable scores, improvement was assessed based on the pre and post data gathered through pre designed research proforma. The statistical analysis was done. Overall Improvement in *Amalaki* group, marked improvement was found in 75% subjects, moderate improvement was found in 15% subjects, mild improvement was found in 5% subjects and no improvement was found in 5% subjects when compared with placebo group. *Amalaki* shows marked improvement in the management of *Amlapitta* and the effect was better than placebo group.

Key words: *Amlapitta*, *Amalaki*, *Pathya*, hyperacidity

INTRODUCTION

All the living beings originate from food which is considered as supreme or *Brahma*. It is responsible for life of all beings.[1] Food is one among the three sub pillars supporting the life.[2] *Pathya* is that which will not harm the *srotas* (channel) of the body, which is liked by an individual and help in the maintenance of health. Diseases can be cured without any medicines by just following wholesome regimen whereas even hundreds of medicines can't cure a disease in absence of wholesome regimen.[3] No medicine is equivalent to food; it is possible to make a person disease free with just proper diet. [4]

Amlapitta is a disease having a direct relationship with the Gastro Intestinal Tract. *Mithya Ahara* and *Vihara* (improper food and regimen) are the chief causes in the origin of this disease. These factors are responsible for the state of *Agnimandya* (reduced digestive power) and vitiate the *dravata* (liquidity) of *Pitta* hence causing *shukthata* (sourness) and *vidagdata* (indigestion) of *Ahara Rasa* (essence of food product) leading to causation of *Amlapitta*.[5] So *Pathya* and *Apathya* (unwholesome diet) have great influence in modifying the severity of the illness. *Ayurveda* gives a complete look into the life style of a person

starting from his or her personality to the daily food habits. The science teaches how to live in balanced way, highlights importance of both preventive and therapeutic aspects of medicines.

In *Ayurveda* the *Nidanas* (cause) mentioned for *Amlapitta* can be classified into *Aaharajanya* (food habits), *Vihaarajanya* (activities) and *Maanasika Bhavas* (psychological factor) all of which can be correlated to etiologies mentioned under life style changes. Hyperacidity is the commonest health problems which are triggered by irregular and improper food habits. Hyperacidity eventually leads to complications like gastric ulcers, carcinoma and perforation. The need for hour is to find out ways by which we can manage the condition hyper acidity through dietary and life style modifications rather than medicines.

Amalaki is *Amla Pradhana Pancha Rasa* (contain five tastes, among them sour is predominent) and is *Pitta Shamaka* (alleviates bile).[6] Due to non availability of fresh *Amalaki* in all seasons except fruiting season so its *churna* (powder) was used. *Amalaki phala churna* was purchased from *Gadagil vanoushada sangraha, Belgaum*, conducted phyto-chemical analysis of *amalaki churna* in SDM center for research in Ayurveda and Allied sciences, Udupi. Report of the analysis shows that it contains flavonoid, phenol and tannic acid. So here an effort was made to evaluate the effects of *Amalaki* as *Pathya* in subjects suffering from *Amlapitta* and also objective of present study approved from human ethical commitee.

MATERIALS AND METHODS

Source of data: Subjects fulfilling the diagnostic criteria were selected from OPD and IPD of SDM college of Ayurveda and Hospital, Hassan.

Diagnostic criteria: The patients having *Hrit, Kanta Daaha* and *Tikta* and/or *Amlodgaara*, along with having at least three symptoms among the following list were diagnosed as having *Amlapitta* like *Avipaaka*, *Aruchi*, *Shiroruja*, *Chardi* and *Udara Gaurava.*[7]

Inclusion criteria:1) The patients of *Amlapitta* irrespective of sex, caste & socioeconomic status 2) The patients between age group of 16 – 60 years were selected.

Exclusion criteria:1) Patients who have undergone gastric surgeries 2) Known cases of gastric & duodenal ulcers 3) Patients with gastric malignancies 4) Gastritis with other systemic disorders.

Study design: 40 subjects fulfilling diagnostic criteria were selected and randomly assigned in 2 groups: Group A: *Amalaki Churna* (5gm) was given thrice daily, just before food mixed with water for 1 month. Group B: Placebo (*Ragi* flour), given in the same dose and manner, routine diet with limited use of spice and salt.

The subjects were assessed at the interval of 1 week during study. Improvement in signs and symptoms were noted. Side effect or any discomfort during regimen was assessed. The duration of regimen was one month in both the groups.

RESULTS

The results were analyzed using SPSS Version – 14. As there were two groups and sample size less than 30 so student't' test was applied. For analyzing the result within the group Paired t-test was used. For assessing the result between the groups Unpaired t-test was implemented.

Table 1 - Showing the result of Group A among 20 subjects

Parameters	Mean	Mean	% of	SD	SE	't' val-	P value

	BT	AT	Relief			ue	
Chest burn	1.90	0.25	86.84%	0.670	0.150	11.000	0.000
Throat burn	1.65	0.20	87.87%	0.825	0.184	7.855	0.000
Stomach burn	1.25	0.25	80%	0.973	0.217	4.595	0.000
Bitter belching	1.00	0.20	80%	1.005	0.224	3.559	<0.001
Sour belching	1.60	0.20	87.5%	0.940	0.210	6.658	0.000
Disturbed appetite	2.00	0.50	75%	0.606	0.135	11.052	0.000
Abdominal pain	1.00	0.25	75%	0.850	0.190	3.943	<0.001
Tastelessness	0.35	0.10	71.4%	0.638	0.142	1.751	<0.01
Nausea	0.75	0.00	100%	0.786	0.175	4.265	0.000
Vomiting	0.25	0.00	100%	-	-	1.561	<0.01
Abdominal heaviness	1.20	0.15	87.5%	0.825	0.184	5.688	0.000
Headache	0.70	0.40	42.8%	0.571	0.127	2.349	<0.01
Symptom in relation with food	1.15	0.40	65.25%	0.44	0.99	7.550	0.000
Irritability	1.25	0.90	28%	0.745	0.166	2.101	<0.05

Highly significant - 0.000 Significant - < 0.001, < 0.01 Not significant - <0.05

Table 2 - Showing the result of Group B among 20 subjects

Parameters	Mean BT	Mean AT	% of Relief	SD	SE	't' value	P value
Chest burn	1.30	1.30	0	0.458	0.10	0.000	>0.05
Throat burn	1.15	1.20	4.3%	0.394	0.08	-0.567	>0.05
Stomach burn	1.30	1.25	6.5%	0.223	0.05	1.000	>0.05
Bitter belching	-	-	-	-	-	-	-
Sour belching	1.40	1.30	7.1%	0.307	0.06	1.453	>0.05
Disturbed appetite	1.25	1.20	4%	0.223	0.05	1.000	>0.05
Abdominal pain	-	-	-	-	-	-	-
Tastelessness	0.25	0.20	20%	0.39	0.08	0.567	>0.05
Nausea	0.20	0.05	75%	0.36	0.08	1.831	>0.05
Vomiting	0.10	0.05	50%	0.22	0.05	1.000	>0.05
Abdominal heaviness	0.85	0.70	17.64%	0.36	0.08	1.831	>0.05
Headache	0.65	0.60	7.69%	0.22	0.05	1.000	>0.05

Symptom in relation with food	1.55	1.25	19.35%	0.57	0.12	2.349	>0.05
Irritability	0.85	0.95	11.7%	0.30	0.06	-1.453	>0.05

Highly significant - 0.000 Significant - < 0.001, < 0.01 Not significant - <0.05

Table 3 - Showing the overall result between groups

Parameters	Mean diff	SE	't' value	P value
Chest burn	1.650	0.182	9.07	0.000
Throat burn	1.50	0.205	7.33	0.000
Stomach burn	0.95	0.223	4.25	0.000
Bitter belching	1.125	0.181	6.21	0.000
Sour belching	1.300	0.221	5.87	0.000
Disturbed appetite	1.550	0.160	9.67	0.000
Abdominal pain	0.75	0.190	3.94	0.000
Tastelessness	0.100	0.164	0.60	<0.1
Nausea	0.600	0.193	3.09	<0.001
Vomiting	0.200	0.167	1.19	>0.05
Abdominal heaviness	0.900	0.201	4.45	0.000
Headache	0.250	0.137	1.82	<0.1
Symptom in relation with food	0.450	0.161	2.78	<0.01
Irritability	0.450	0.180	2.49	<0.01

Highly significant - 0.000 Significant - < 0.001, < 0.01 Not significant - <0.05

Table 4 - Showing overall improvement in Group A

Improvement	Parameters	%
Complete Remission	>12 Parameters	0
Marked Improvement	9-12 Parameters	75%
Moderate Improvement	5-8 Parameters	15%
Mild Improvement	1-4 Parameters	5%

DISCUSSION

Madhura rasa (sweet taste) , *Madhura vipaka* (sweet end product of food) , *Sheeta guna* (cold) and *Sheeta virya* (cold potency) of Amalaki[8] pacifies the *dravata* and *amlata* (sourness) of vitiated *Pitta dosha* there by it gives relief in the symptoms like burning sensation in chest, throat and stomach region, sour and bitter belching, nausea, vomiting, symptoms in relation with food, headache, abdominal pain and irritability.

Amalaki by its *amla* and *tikta rasa* (bitter taste) and *ruksha* guna (dryness)[9] does the *ama pachana* (indigested food gets digested) and *kleda harana* (removes moistureness) there by it improves appetite and digestion helps to relieve symptoms like abdominal heaviness and tastelessness.

A Study shown that plant-originated flavonoid substances are highly gastroprotective probably due to enhancement of the expression of neuropeptides such as calcitonin gene related peptide (CGRP) released from sensory afferent nerves increasing gastric microcirculation.[10] A Study Showed that Phenolic

compounds (i.e. gallic acid, tannic acid, etc.) are having strong antioxidant action. It is also evident that phenolic compounds obtained from natural source may reduce oxidative stress by free-radical scavenging activity. Hence, the results of the present work suggest that the FPEO (Free phenolic compound of Emblica officinalis) and BPEO (Bounded phenolic compound of Emblica officinalis) fractions from the fruit of E. officinalis can attenuate the acute and chronic inflammatory response via antioxidant action.[11] Tannins have been shown to present antioxidant activity, promote tissue repair, exhibit anti *Helicobacter pylori* effects, and they are involved in gastrointestinal tract anti-inflammatory processes. The presence of tannins explains the anti-ulcer effects of many natural products.[12] No improvement was found in this group the reason may be due *to Kashaya rasa* of Ragi flour aggravate vitiated *Vata dosha*, where as *Tikshna guna* enhances the further vitiation of *Dravata* of *Pitta dosha*

CONCLUSION

The period of 21st century is regarded as the era of fast technology and tough competition. The man of this era is becoming prey to series of life style disorder which are much more bothering than the infective diseases. Diseases can be cured without any medicines by just following wholesome regimen whereas even hundreds of medicines can't cure a disease in absence of wholesome regimen. No medicine is equivalent to food; it is possible to make a person disease free with just proper diet. In this study *Amalaki* showed marked improvement in the management of *Amlapitta* as *pathya* and the effect was better than placebo group.

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