

ISSN: 2322 - 0902 (P) ISSN: 2322 - 0910 (0)

Research Article

ROLE OF GUDADI MODAK IN THE MANAGEMENT OF AMLAPITTA W.S.R TO DIET AND LIFESTYLE

Rinky Thakur¹, Naresh Sharma², Gopal C Nanda^{3*}

¹Research Officer, *³Assistant Director and Incharge (Scientist-IV), Dr.AL Research Centre for Ayurveda (CCRAS), Chennai, Tamil Nadu, India.

²Professor & Head, P.G Dept. of Ayurved Samhita and Siddhant, Rajiv Gandhi Govt. Ayurvedic College, Paprola, Himachal pradesh, India.

ABSTRACT

In present scenario with hasty and agonizing mental stress in competitive life and incompatible diet. people are suffering from many lifestyle diseases. Amlapitta is one of them. It has adverse effect on the digestion and metabolism, with presence of symptoms like Avipaka, Klama, Utklesha, Amlodgara, Gauravta, Hrit Kantha Daha and Aruchi. Ayurveda is a holistic science which provides solutions with the help of natural resources as a principle of management. Different Ayurvedic literatures were scrutinized for description of Aahar (Diet)- Vihar (lifestyle) and drug Gudadi modaka has been taken from Chakradutta Amlapitta chikitsa for the management of Amlapitta. The 30 patient were selected for the study between the age group of 20-70 years from the OPD of Rajiv Gandhi Government Post Graduate Ayurvedic College and Hospital, Paprola, H.P. Patients were selected on the basis of specially prepared assessment criteria. Patients of both groups showed good improvement in the symptoms of Amlapitta. Patients of group II (Gudadi modak + Aahar -Vihara) showed slightly more significant results. Gudadi modak & proper dietary routine discipline has important role to achieve early and better result. To follow the code of *Pathya & Apatyha* and drug intake is the basic management of this disease. It is devoid of any side effect.

KEYWORDS: Amlapitta, Ahara-Vihara, Gudadi modak.

INTRODUCTION

Universal principle of Ayurveda is that every material of this universe is composed of *Panchmahabhuta*. It reveals that our body is constituted by Panchmahabhuta and also supplemented or nourished by the Ahara which is also composed of Panchmahabhuta. Ahara is said to be *Prana.* it helps in sustenance of life of living being^[1] that means homeostasis of our body and mind dependent upon the compatible diet and proper lifestyle. As we know our diet, activities and routine have a direct impact on our health. Eating correctly is the most important aspect. Ahara despite being basic to life is also destructive of life

Amlapitta is disease having direct link with type of food consumed, food habit, food timing, lifestyle, timing of work, rest and type of work.[2] Ayurveda has laid much emphasis on the preventive aspects of the disease and provides an integrated approach to preventing and treating illness through lifestyle interventions and natural therapies which is the only cure for such kind of disease. So one should follow the code and conducts of diet and daily routine i.e., Ahara vidhi vidhan, Dincharya, Ritucharya and Yoga.

Acharya Kashyapa and Madhavakara have given the paramount importance to the Amlapitta as a disease. Describing the pathogenesis of Amlapitta in Kashyapa samhita it is explained that the disease is caused by vitiation of Doshas (Tridosha) leading to Mandagni & then to Vidagdhajirna manifesting as Amlapitta. Madhavakara has described that already Sanchita pitta when become

Vidagdha due to Pitta prakopaka nidanas leads to development of Amlapitta.[3]

AIMS AND OBJECTIVE

- To study the efficacy of Ahara-Vihara therapy (diet and lifestyle) under the advised /concept in Ayurvedic text as well as in allied literatures.
- Establishment of Amlapitta according to Ayurveda in parallelism with modern literature.
- To evaluate the effect of trial drug Gudadi Modaka on selected subjects.
- To compare the effect of both groups.

MATERIAL AND METHODS

This study was open clinical trial in double group. The study was conducted on 30 patients and was selected from OPD of associated hospital and R.G.G.P.G. Ayurvedic College, Paprola (H.P.).

Criteria of Diagnosis

The diagnosis of the patients was done on the basis of criteria adopted for the study with informed consent.

> Inclusion criteria

- ❖ Age between 20-70 years of either sex
- ❖ Patients presenting with feature of *Amlapitta*.

> Exclusion criteria

- ❖ Patients of age < 20 and above 70 years
- Patients with IBS, Grahani, Sangrahani, Atisara
- Diabetes mellitus, pregnancy

Plan of study Administration of drug and management

- ➤ 30 patients with diagnosed case of *Amlapitta* were registered for the study.
- ➤ The patients were advised with recommended *Ahara-Vihara* therapy along with trial drug *Gudadi Modaka* 3gm twice daily morning evening empty stomach for period of 2 months with follow up period in every 15days interval.

Review of Literature- In Ayurvedic text *Pathya -Apathya* has been given importance in treating the diseases it means when a disease is taken in management *Pathya* and *Apathya* are highly considered and advised to patient accordingly, in this reference various texts were consulted and the detail do's and don'ts were calculated and presented in the table below

Table 1: Pathya & Apathya mentioned in Amlapitta by different Classics [2, 4, 5, 6]

S.No	Classes of diet	Pathya (Do's)	Apathya (Don'ts)
1.	Cereals	Rice of old <i>Shali</i> variety, <i>Yava</i> , wheat	Naveen Anna
		(Godhuma)	
2.	Pulses	Mudaga (green gram), lentil	Kulatha, Urad
3.	Vegetables	Patola, Vastuka, Karvelak, carrot, mint,	Mustard leaves, fenugreek, Brinjal
		spinach, Amala, bitter gourd, pumpkin.	gourd
4.	Fruits	Dadima, Kapitha, Amalaki, Kushmanda,	Jackfruit, water melon, cashew
		apple, banana, sweet orange, coconut,	fruit, lime, pineapple, plum
		mango, dates.	
5.	Milk products and drinks	Goghrita, Godugdha, butter milk	Curd, sour butter milk, paneer,
			Kanji (country liquor)
6.	Sugarcane and its products	Sugar, honey	-
8.	Cooked food	Meat and meat soup of animals and birds	Items fried in oil
9.	Adjuvant of food	All <i>Tikta</i> juices and edibles	Salt, Amla and Katu juices, Achara,
			Chatni, Khattai
10.	Spices	Garlic, dry ginger, clove, turmeric,	Asafetida, chilly, cinnamon,
		saffron, cumin Ayurveda	mustard seeds, pepper, tamarind
11.	Roots and Tubers	Beet root, sweet potato, carrot	
12.	Nuts	Coconut	Peanut, groundnut
13.	Oils	Sunflower, coconut oil	Mustard oil, sea same oil

Table 2: Moreover a detail protocol as per the classics have been enumerated here under

P	athya Ahara	Apathya Ahara
Anna varga	Yava (barley)	Kulattha (horse gram)
(class of cereals)	Godhuma (wheat)	Guruanna (heavy food)
	Puranashali (old rice)	Tila (sesamum)
	Mudga yusha (soup of green grams)	Masha (black gram)
Saka varga	Karvellaka(bitter guard)	Dadhi (curd)
(class of vegetables)	Patola (pointed gourd)	Madhya (alcohol)
	Kushmanda	Katu (bitter) Lavana (salty), Amla (sour) food item
	Parval, Bathua	Rasona (garlic)
Phal varga	Dadima (pomegranate)	Atipan (excessive intake of fluid)
(class of fruits)	Kadli (banana)	Pitta prakopak anna
	Amalaki (Amala)	
	Kapittha	
Dugdha varga (class of milk)	Godugdha (cow milk)	
Miscellaneous	Sharkara (sugar)	
	Madhu (honey)	
	Narikelodaka (coconut water)	·
	Goghrita (cow ghee)	

Pathya vihara	Apathya vihara
Shitopachara (exposure to cold)	Ajeerna bhojana (intake of food before digestion of food previously taken)
Vishram (rest)	Vegavidharana (suppression of natural urges)
Pranayam	Atisnana (excessive bath)
Beneficial exercises	Chinta, Krodha, Shoka (anxiety, anger, grief)
	Bhuktva divaswapana (sleep after lunch)

Reparation of Medicine

Ingredients like *Haritaki, Pippali* and *Guda* in equal ratio were procured and made into *Yavkutchuran* and prepared in *Charak* Pharmacy of R.G.G.P.G.Ayu.College Paprola following standard GMP practice. As the name suggests *Gudadi Modak* according to classics, but it was not prepared in form of *Modak*, it was prepared in form of granules to make more palatable to patients.

STUDY DESIGN

This was the main study of the present research work in which minimum sample of 30 patients was assessed during clinical trial.

Grouping of patients

All the patients were grouped into two groups.

- ❖ Group I- Ahara-Vihara therapy
- ❖ Group II- *Gudadi Modaka + Ahara-Vihara* therapy

Assessment Criteria

Scoring system was adopted for assessment of various subjective features and grades from zero to three were recorded to various features according to the severity. The grading of various clinical features is as follows.

Grading for Assessment [7, 8, 9]

Hritkanthadaha (Retrosternal burning)

Grade 0 -No daha

Grade 1 -Awareness of heart burn but easily tolerated

Grade 2 - *Daha* relieved by cold milk, antacids, food and vomiting

Grade 3 *-Daha* not relieved by cold milk, antacids, food and vomiting

Amla Udgara (Acidic Eructations)

Grade 0 -Usually after food udgar will b there.

Grade 1 -Amla udgar after every meal with foul smell.

Grade 2 -Relieved by antacids.

Grade 3 -Not relieved by antacids.

Utklesha (Nausea)

Grade 0 -Absent

Grade 1 -Related to food or not.

Grade 2 -Accompanied by vomiting.

Grade 3 -Relieved by medicine only.

Avipaka (Indigestion)

Grade 0 -Normal digestion

Grade 1 -Pain, flatulence and anorexia.

Grade 2 -Relation to food (appetite) and bowel moment.

Grade 3 -Relieved by antacids.

Vaman (Vomitings)

Grade 0 -No vomiting

Grade 1 -one episode in 24 hrs with relation to food.

Grade 2 -More than one episode in 24hrs relation to meal with time.

Grade 3 -More than 3 episodes in 24 hrs proceeded by nausea or pain.

Aruchi (Loss of appetite)

Grade 0 -Normal desire for food

Grade 1 -Eating timely without much desire

Grade 2 -Desire for food only after long interval

Grade 3 -No desire for food, sometimes feeling of taste and mostly absence of taste after meal.

Adhman (Flatulence)

Grade 0 - Absent

Grade 1 -Occasional feeling of distension without pain, passes as flatus per anus

 $\label{eq:Grade 2-Frequent feeling of distension with offensive flatus$

Grade 3 -Continuous distended abdomen

Klama (Mental fatigue)

Grade 0 -No complaint

Grade 1 -Mild mental fatigue during morning hours

Grade 2 -Loss of partial interest in the work

Grade 3 -Loss of total interest in work

Koshtha Vichara (Heaviness in abdomen)

Grade 0 -Normal

Grade 1 -Motions are not clear in last 24hrs

Grade 2 -Insufficient one or two motions in last 24 hrs

Grade 3 -No motion in 48 hrs with discomfort in abdomen

Kukshi Daha (Epigastric burning)

Grade 0 -No epigastric burning

Grade 1 -Awareness of burning but easily tolerated

Grade 2 -Burning relieved by cold milk, antacids

Grade 3 -Burning not relieved by cold drinks, antacids

Bhram (Giddiness)

Grade 0 - No giddiness

Grade 1 -Lightheadedness

Grade 2 -Blackout or vague symptoms

Grade 3 -Off balance

Gauravata (Heaviness in body)

Grade 0 -No feeling of heaviness in body

Grade 1 -Feeling of heaviness in body during work

Grade 2 -Feeling of heaviness in body during work and rest

Grade 3 -Lack of interest toward any work

Overall Assessment Criteria

The symptoms were evaluated and response of drug was recorded in terms of percentage relief of symptoms.

Percentage relief = Total BT - Total AT X 100

Total BT

BT=Sum total of grade score before treatment

AT= Sum total of grade score after treatment

Patients were grouped under following categories on the basis of their results of the clinical trial.

- ➤ Complete relief more than 90% relief from symptoms.
- ➤ Marked relief 60 to 89 % relief from symptoms.
- ➤ Moderate relief 30 to 59 % relief from symptoms.
- ➤ Mild relief less than 30% relief from symptoms.

Statistical Analysis of Results

All the data were collected and then statistically analyzed. The results were made on the basis of grades of

various variables compared between pre trial and post trial values in terms of percentage, based on mathematical means and its difference. Values between variables were compared with student (t) paired test for dependent samples by using the degree of freedom p value. Inter group comparison was also done with independent (unpaired) t test. The results were expressed in terms of mean, standard deviation (S.D.) and standard error (S.E.).

p value of less than 0.001 (p<0.001) was considered as highly significant, p value less than 0.01 (p<0.01) as

moderately significant and less than 0.05 (p<0.05) as significant where as p value more than 0.05 (p>0.05) was considered as insignificant. $^{[10]}$

OBSERVATION OF STUDY

In this present study the observations have been made on the basis of demographic data and clinical profile. All the patients were put in two groups having 15 numbers in each group. After stipulated trial period the patients were assessed as per criteria led down.

Table 3: Under clinical observation, the distribution of symptoms in 30 patients of Amlapitta was as follows

Sr. No.	Symptoms		Gr. – I	G	r II	Total	
		Pt.	% age	Pt.	% age	Pt.	% age
1.	Hrit kantha daha (Retrosternal burning)	15	100%	15	100%	30	100%
2.	Amla udgar (Acidic Eructations)	12	80%	14	93.33%	26	86.66%
3.	Utklesh (Nausea)	14	93.33%	11	73.33%	25	83.3%
4.	Avipaka (Indigestion)	15	100%	15	100%	30	100%
5.	Vaman (Vomiting)	11	73.3%	10	66.6%	21	70%
6.	Adhman (Flatulence)	15	100%	15	100%	30	100%
7.	Aruchi (Loss of appetite)	15	100%	15	100%	30	100%
8.	Klama (Mental fatigue)	12	80%	13	86.6%	25	83.3%
9.	Koshtha vichara (Heaviness in abdomen)	13	86.6%	14	93.3%	27	90%
10.	Kukshi Daha (Epigastric burning)	13	86.6%	12	80%	25	83.3%
11.	Bhrama (Giddiness)	11	73.3%	12	80%	23	76.6%
12.	Gauravata (Heaviness in body)	13	86.6%	12	80%	25	83.3%

Table 4: Effect Of Therapy in Group-I (paired t test) (n=15)

	of min://liaprin									
Sr. No	Symptoms	Me	Mean		% relief		SE±	't'	P	
		BT	AT	Diff.	% age					
1.	Hrit kantha Daha	1.933	0.6	1.333	6 <mark>8.</mark> 97	0.488	0.126	10.583	< 0.001	
2.	Amla udgara	1.666	0.6	1.066	64	0.704	0.182	5.870	< 0.001	
3.	Utklesh	1.533	0.6	0.933	60.8	0.594	0.153	6.089	< 0.001	
4.	Avipaka	2	0.733	1.266	63.3	0.458	0.118	10.717	< 0.001	
5.	Vaman	0.866	0.466	0.400	46.15	0.507	0.131	3.055	0.009	
6.	Adhman	1.933	0.8	1.133	58.62	0.516	0.133	8.500	< 0.001	
7.	Aruchi	1.6	0.6	1	62.5	0.535	0.138	7.246	< 0.001	
8.	Klama	1.2	0.533	0.666	55.55	0.617	0.159	4.183	< 0.001	
9	Koshtha vichara	1.66	0.66	1	60	0.655	0.169	5.916	< 0.001	
10	Kukshi daha	1.26	0.6	0.6	47.36	0.507	0.131	4.583	< 0.001	
11	Bhram	1	0.466	0.533	53.3	0.640	0.165	3.22	0.006	
12	Gauravata	1.4	0.6	8.0	57.1	0.775	0.200	4.000	0.001	

[n=15, Paired t-test is used for comparison of before and after treatment means value<0.05 is considered as significant and <0.001 is considered as highly significant].

Table 5: Effect of therapy in Group-II (paired t test) (n=15)

Sr. No.	Symptoms	Me	Mean		% relief		SE±	't'	P
		BT	AT	Diff	% age				
1.	Hritkantha daha	1.86	0.4	1.46	78.57	0.640	0.165	8.876	< 0.001
2.	Amla udgara	1.8	0.46	1.33	74.07	0.816	0.211	6.325	< 0.001
3.	Utklesh	1.26	0.4	0.86	68.42	0.594	0.153	6.089	< 0.001
4.	Avipaka	1.73	0.53	1.2	69.23	0.561	0.145	8.29	< 0.001
5.	Vaman	0.66	0.33	0.33	50	0.488	0.126	2.646	0.019
6.	Adhman	1.93	0.66	1.26	65.51	0.594	0.153	8.264	< 0.001
7.	Aruchi	1.66	0.53	1.13	68	0.516	0.133	7.264	< 0.001
8.	Klama	1.46	0.6	0.86	59.01	0.834	0.215	4.026	=0.001
9	Koshtha vichara	1.93	0.6	1.33	68.96	0.976	0.252	5.292	< 0.001
10.	Kukshi Daha	1.66	0.73	0.933	56	0.799	0.206	4.525	< 0.001
11.	Bhrama	1.06	0.46	0.6	56.25	0.632	0.163	3.674	0.003
12.	Gauravata.	1.53	0.53	1	65.21	0.845	0.218	4.58	< 0.001

[n=15, Paired t-test is used for comparison of before and after treatment means, p value<0.05 is considered as significant and <0.001 is considered as highly significant]

Table 6: Inter group comparison on criteria of assessment (unpaired t test)

Sr. No.	Symptoms	% Relief		Diff. in % age	SD ±	SE ±	't'	P
		Gr I	Gr.II					
1.	Hrit kantha Daha	68.96	78.57	9.61	0.590	0.214	0.626	>0.05
2.	Amla udgara	64	74.07	10.07	0.796	0.464	0.566	>0.05
3.	Utklesh	60.86	68.42	7.56	0.259	0.097	0.680	>0.05
4.	Avipaka	63.33	69.21	5.88	0.531	0.137	0.489	>0.05
5.	Vaman	46.15	50	3.85	0.456	0.198	0.353	>0.05
6.	Adhman	58.62	65.51	6.89	0.577	0.150	0.893	>0.05
7.	Aruchi	62.5	68	5.5	0.545	0.141	0.943	>0.05
8.	Klama	55.5	59.09	3.59	0.772	0.307	0.66	>0.05
9.	Koshtha vichara	60	68.96	8.96	0.872	0.509	0.648	>0.05
10.	Kukshi Daha	47.36	56	8.64	0.693	0.276	1.20	>0.05
11	Bhrama	53.33	56.25	2.92	0.668	0.265	0.252	>0.05
12.	Gaurvata	57.14	65.21	8.07	0.846	0.337	0.21	>0.05

RESULT

In the present study the drug was assessed in two separate groups and the effect of therapy was also assessed accordingly (Table no) (n=30)

Total efficacy	Gr I		Gr	· II	Total		
	No. of pts.	%age	No. of pts.	%age	No. of pts.	% age	
Complete relief	-	-		-	-	-	
Marked relief	7	46%	10	66.6%	17	56.66%	
Moderate relief	8	53.3%	v5rved	33.3%	13	43.33%	
No relief	-	- 101	up://ijapr.ir	1280 -	-	-	

From the above table it was observed that no patient was found having complete relief in both the groups, however 56.6% of both groups were found having marked relief with 46% in group-1 and 66.5% in group -11. So far moderate relief is concerned it was observed 43.33% in both the groups having 53.3% in group -1 in comparison to 33.3 in group -11. It was observed from study that all the patients got relief either moderate or marked.

DISCUSSION

Amlapitta is a common disorder of Annavaha srotas mainly caused due to indulgence in faulty diet and lifestyle. Ahara and Vihara has very important role in the causation and management of disease. So food advised to patients should be of Pitta shamak property having Tikta, Kashaya rasa, Laghu guna, Sheet virya and Madhur vipaka mostly. One should have detailed description about Ahara vidhi vidhan (dietary guidelines) and Ahara vidhi vishesa ayatana (Factors of diet and dietetics). From the above study it could be concluded that diet plays a major role in comparison to drug as evident from the study result discussed above which corroborates the concept of Pathya and Apathya dietic regimen) in Ayurveda. However it was also studied from the Panchpanchak of the drugs with their probable mode of action as listed below.

Probable mode of action of Gudadi modak Rasa Panchak of Drug [11-13]

Sr. No.	Drug	Rasa	Guna	Veerya	Vipaka	Doshaghnata
1	Haritaki	Panch Rasa yukta	Laghu, Ruksha	Ushna	Madhura	Tridosha, Shamaka
		(except lavana)				
2	Pippali	Katu	Laghu, Snigdh	Anushna, Sheeta	Madhura	Vata-kapha, Shamka
3.	Guda	Madhur	Guru, Ruksha	Sheeta	Madhura	Vata-pitta shamak

From the above table it is analysed that Madhura rasa is having Sheeta, Snigdha and Guru properties. These properties antagonize the Ushna, Tikshna and Laghu gunas of Pitta dosha. Madhura rasa is Pitta vata shamaka. Tikta, Madhura and Kashaya rasa are Pitta shamaka. Tikta rasa and Kashaya rasa have Ruksha, Sheeta and Laghu properties, due to these properties these Rasas will do Srotoroshodhak, Aama pachana and Vata anulomna as well as both rasa are Pittakapha shamaka. Tikta rasa is also having properties like Deepana, Pachana, Rochak which are essential in the management Amlapitta^[14]. The drugs are Ushna and Sheeta virya, Ushna virya causes Agni Deepana effect and Sheeta virya is Pitta shamaka^[15] Katu rasa by virtue of its Agni deepan property helps in

management of Amlapitta. Maximum drugs have Madhura vipaka and it is said to be Pitta shamaka and Vataanulomana. [16]

The Madhura Vipaka pacifies Pitta so that Amlata and Dravata of Pitta dosha does not aggravate, so the process of Agnimandya eliminates out as consequently defective Rasa dhatu does not form. Also Madhur rasa has got a soothing effect on the body tissues and helps in the production of fresh and healthy tissues. On the basis of this logical reasoning it may be said that in different inflammatory conditions where tissues are degenerated or undergone ulceration are regenerated by the Madhura vipaka. All the contents are Laghu and Ruksha in property.

There is increase of *Drava guna* in *Amlapitta. Kledaka kapha* and *Pachaka pitta* are *Drava* in dominancy. So *Laghu, Ruksha guna* performs the function of *Dravansh shoshana*. Other functions of *Laghu, Ruksha guna* are *Lekhana, Sthambhan* and *Ropana*.[17]

CONCLUSION

On the basis of result it can be safely concluded from present study that ($Aahar - Vihar + Gudadi \ Modak$) has shown quite better relief in symptoms in comparison to only Aahar - Vihar therapy in treating the disease. The present study revealed that proper and carefully planned diet and lifestyle as per the description in Ayurveda along with medicine can go long way rooting out the disease and restoring strong health.

REFERENCES

- Charaka Samhita Sutrasthana. Elaborated Vidyotni Hindi Commentary by Pt.Kashinath Shastri, Dr.Gorakh Nath Chaturvedi. Second Edition; Varanasi; Reprint Chaukhambha Bharati Academy; 1969.p.567.
- Kashyapa Samhita. Vriddha Jivaka. revised by Vatsya. Edited by Pandit Hemaraja Sarma. Varanasi; Chaukhamba Sanskrit Sansthana;1953.p.336.
- 3. Madhavakara with Madhukosha commentary of Shrivijayarakshita & Shrikanthadatta, Sixth edition Varanasi; Chaukhambha Sanskrit Sansthan; 2001. p.291.
- 4. Yogratnakar, Dr.indradev, Dr. Dayashankar tripathi, Seventh edition. Varanasi; Chaukhamba Sanskrit Sansthan; 2002.p.667.
- 5. Bhaisajyaratnavali, Prof. Gyanendra Pandey First Edition. Volume 111, Varanasi Chaukhamba Sanskrit Sansthan; 2008.p.155-156.
- Harit Samhita. Kshemraj-Shrikrishnadas, Shrivanketshwar mudralaya publication;1954.p.371.

- 7. Kashyap Samhita. Vriddha Jivaka revised by Vatsya. Edited by Pandit Hemaraja Sarma; Varanasi; Chaukhamba Sanskrit Sansthana; 1953.p.372.
- Madhavakara with Madhukosha commentory of Shrivijayarakshita & Shrikanthadatta, Varanasi, Sixth edition. Published by Chaukhambha Sanskrit Sansthan; 2001.p.171.
- 9. Yogratnakar. Dr.Indradev and Dr.Dayashankar tripathi, Seventh edition; Varanasi; Chaukhamba Sanskrit Sansthana; 2002.p.666.
- 10. B.K. Mahajan. Methods in Biostatistics for Medical Students and Research Workers Chapter 9, Revised by Arun Bhadra Khanal. Seventh Edition; New Delhi; Jaypee Brothers Medical Publishers; 2010, p.127-137.
- 11. P.C, Sharma, M.B Yelne, T.J. Dennis. Database on medicinal plants used in Ayurveda New Delhi. Vol. 3. CCRAS, 2001; p.282.
- 12. P.C.Sharma, M.BYelne, T.J.Dennis. Database on medicinal plants in Ayurveda, Vol.-3,New Delhi CCRAS; 2001.p.473.
- 13. P.C.Sharma, M.BYelne, T.J.Dennis. Database on medicinal plants used in Ayurveda, Vol.-IV, New Delhi CCRAS; 2002.p.188.
- 14. Charak Samhita Sutrasthana Elaborated Vidyotni Hindi Commentary by Pt.Kashinath Shastri, Dr.Dr. Gorakh Nath Chaturvedi, Second Edition Reprint Chaukhambha Bharti Academy Varanasi; 1969.p.507.
- 15. Dr.Keval Krishna Thakral.Part-1 Sushrut Samhita Sutrasthan, Nidansthan, Varanasi Chaukhambha Orientalia; 2014.p.459.
- 16. Dr.Keval Krishna Thakral.Part-1 Sushrut Samhita. Sutrasthan, Nidansthan, Varanasi Chaukhambha Orientalia; 2014.p.452.
- 17. Dr.Keval Krishna Thakral.Part-1 Sushrut Samhita. Sutrasthan, Nidansthan, Varanasi Chaukhambha Orientalia; 2014.p.657.

Cite this article as:

Rinky Thakur, Naresh Sharma, Gopal C Nanda. Role of Gudadi Modak in the Management of Amlapitta w.s.r to Diet and Lifestyle. International Journal of Ayurveda and Pharma Research. 2017;5(3):14-19.

Source of support: Nil, Conflict of interest: None Declared

*Address for correspondence Dr.G.C Nanda

Assistant Director and Incharge [Scientist-IV], Regional Ayurveda Dr.AL Research centre for Ayurveda (CCRAS), Chennai Tamil Nadu, India. Email: vdgnanda@gmail.com

alrca.chennai@gmail.com

Mob: 09415001345