IJAPC

Volume 11 Issue 2, 2019 www.ijapc.com 2350-0204

GREENTREE GROUP PUBLISHERS



REVIEW ARTICLE

www.ijapc.com e-ISSN 2350-0204

Assessment of Role of Pathya Aahar and Shitali Pranayam in Urdhvag Amlapitta

Roma Gangawane^{1*}, Yogesh Yelmar² and Arti Firke³

^{1,2}Tilak Maharashtra Vidyapeeth, Pune, MS, India

³PDEA's CARC, Akurdi, Pune, MS, India

ABSTRACT

PURPOSE OF THE RESEARCH: It is very essential to make people understand the importance of diet, the right time and the way to have *Aahar* as it is the most integral part of life & its imbalance is the major cause in *Vyadhi Samprapti*. *Pathya Aahar* along with *Shitali Pranayam* plays an effective role in *Amlapitta*. *Pranayam* is not only useful for certain disease but also helps to stabilize all the systems/ *doshas* of the body. So keeping the view of this problem, current study was planned to develop a certain daily regime, along with *Shitali Pranayam*, which helped not only to reduce symptoms of disease, but also helped to analyse its effects on the body.

METHODS: 85 registered *UrdhvagAmlapitta* subjects were selected for the study and screened for assessment criteria. For that purpose *Sadya Aahar Vritta* was taken along with CRF to understand diet pattern of each subject and advised changes accordingly.

60 subjects were included in study considering the inclusive and exclusive criteria, allocated into three groups randomly comprising of 20 subjects each.

GROUP A -<u>Pathya Aahar</u>

GROUP B – Shitali Pranayam

GROUP C – Pathya Aahar & Shitali Pranayam

RESULT: *Pathya Aahar* in *Urdhvag Amlapitta* shows significant relief in *Utklesha*, *Tiktamlodgar*, *Hrid Kantha Daha* and *Aruchi*. *Shitali Pranayam* helped in reducing *Shiroruja*, Stress/Anxiety and percentage of sleep disturbances.

CONCLUSION: After comparing the results of the three groups it was seen that Group of *Pathya Aahar* and *Shitali Pranayam* showed significant results both in subjective as well as objective parameters.

KEYWORDS Urdhvag Amlapitta, Pathya Aahar and Shitali Pranayam



Received 01/08/19 Accepted 23/08/19 Published 10/09/19

INTRODUCTION

'Amlapitta' is a disease that is prevalent all over the world; with life span becoming very fast with the growing rate of urbanization hap-hazard and modernization. The degree of is rapidly psychosomatic ailments increasing throughout the world. It is not only a disorder caused by habitual, irregular diet schedule & activities (Aahar - Vihar) but also as a result of psychological and physiological abbreviations. The increasing rate of Amlapitta present is a constant challenge to research workers of Ayurveda. Ideal lifestyle is based on Aahar, Vihar, Achar and Vichar. Thus, lifestyle planning of the healthy and diseased can be helpful for the same.

Right kind of *Aahar* has a very important role in our daily schedule. A disease can be cured without any medication just by consuming right kind of wholesome diet. But at the same time, even with proper medication if a patient has improper diet i.e. *Apathya-Sevan*; health can worsen as the disease is left untreated.¹

Amlapitta makes a person troubled throughout the day interfering in his daily work schedule, ultimately decreases the efficacy to perform the day to day work. Diet Management along with *Pranayam* can be the answer for such problem. *Shitali* *Pranayam* works very well in *Pitta Vikaar*, mentioned as –

• Gulma pleehadik rogan jwaram <u>pittam</u> kshudham trushnam /

Vishani Shitali naam kumbhikeyam nihanti hi ||

- Hathayoga Pradipika 2/58

It is very essential to make people understand the importance of Diet, the right time and the way to have *Aahar* as it is the most integral part of life & its imbalance is the major cause in *Vyadhi Samprapti*. *Pathya Aahar* along with *Shitali Pranayam* plays an effective role in *Amlapitta*. *Pranayam* is not only useful on certain disease but also helps to stabilize all the systems / doshas of the body.

'Stress' is an outcome of the modern lifestyle. It is produced out of dissatisfaction, frustration and dejection when there is negative interaction between self-projection and the adverse internal as well as external environmental conditions. This is a causative factor being *Manasik* Hetu for Amlapitta. Shitali Pranayam has a calming effect on mind and pacifies increased Pitta Dosha.So keeping the view of this problem, in the present era, current study was planned to develop a certain daily regime, along with Shitali Pranayam, which helped not only to reduce symptoms of disease, but also helped to analyse its effects on the body.



AIMS AND OBJECTIVES

• To compile the effect of *Pathya Aahar* and *Shitali Pranayam* in *Amlapitta*.

• To assess the effect of *Pathya Aahar* in *Amlapitta*.

• To assess the effect of *Shitali Pranayam* in *Amlapitta*.

MATERIALS AND METHODS

Study Design

Comparative, Randomized open labelled clinical trial.

Plan of Work

Literary Review

Amlapitta, Pathya Aahar & Shitali Pranayam was compiled from basic Ayurvedic texts, books on Yoga and Pranayam as well as modern medical books, recent research articles, Internet, etc. with the help of gathered references & discussion with experts a special diet chart was prepared along with proforma of Shitali Pranayam.

Clinical

During the Assessment of *Pathya Aahar* and *Shitali Pranayam* in *Urdhvag Amlapitta* following material were used -

Subjects irrespective of sex, age between
 18 - 50 years.

- 2. Prescribed Aahar.
- 3. Demonstration of Shitali Pranayam.

Written Consent

was obtained from subjects prior to the commencement of the study.

Inclusion Criteria

1. Subjects aged between 18 - 50 years of either sex.

2. Screened subjects with *lakshanas* of *Urdhvag Amlapitta* such as;

Utklesha, Tikta-amlodgara, Udar anga Gaurav, Hrid Kantha daha, Aruchi, Shiroruja, Adhaman; etc.

Exclusion Criteria

1. Age group below 18 & above 50 years

2. Pregnant women &lactating mothers.

3. Subjects with history of any major illness / severe disease / surgical intervention

4. Subjects addicted to – Alcohol, Cigarettes, Tobacco, etc.

5. Subjects taking any type of antacids were not included.

Instruments

For the examination following instruments were used

1. $pH paper^2$ 3.

Thermometer

2. BP apparatus 4. Stethoscope

METHODOLOGY

- After the clearance of IEC; 60 registeredsubjects of *Amlapitta*out of 85 were selected from the Swasthya Rakshan OPD.



- For that purpose *Sadya Aahar Vritta* was taken along with CRF to understand diet pattern of each subject and advised changes accordingly.

- 60 subjects were included in study considering the inclusive and exclusive criteria, further distributed into three groups randomly-

GROUP A

20 Subjects - Pathya Aahar

A special diet chart and daily diet Regimen was prepared and explained in detail to the subjects; to be followed for 45 days.

Subjects were advised to initialize the *Pathya Aahar* and *Vihar*, gradually in their schedule.

GROUP B

20 subjects - Shitali Pranayam

Demo of *Padmasana/Siddhasana, Nadi Shodhan Pranayam & Shitali Pranayam* as per Hathyoga Pradipika was explained to the subjects. It was advised to the subjects to do 10 rounds of *Nadi Shodhan Pranayam*, with *Nasagra mudra*, followed by 20 rounds of *Shitali Pranayam*, by sitting in *Padmasana* or *Siddhasana*, early morning, empty stomach for 10 minutes; every day for a period of 45 days.³

GROUP C

20 subjects – <u>Pathya Aahar & Shitali</u> <u>Pranayam</u>

A special diet chart along with demo of Padmasana/Siddhasana, Nadi Shodhan Pranayam was explained; as elaborated while describing Group A & B; for 45 days. All the subjects were examined by subjective and objective Parameters on 1st day. Case record form, specially prepared for observation and follow-ups of the subjects was recorded at specific interval of 15 days for duration of 45 days (i.e. on Day 1, Day 15, Day 30 and Day 45). Subjects of group A & C were advised to make a Daily Diary to quote the daily diet schedule and activities, which was checked at every follow up and dietary changes were advised accordingly.

RESULTS

Group A	Median		Wilcoxon Signed	P-Value	% Effect	Result
	BT AT		RankW			
Utklesha	2	0	-3.666ª	0.000	61.8	S
Tikta-Amlodgar	1.5	1	-3.638 ^a	0.000	50.0	S
Udar-Anga Gaurav	1	1	-2.972ª	0.003	42.9	S
Hridkantha Daha	2	1	-3.494 ^a	0.000	48.6	S
Aaruchi	1	1	-2.714 ^a	0.007	35.7	S
Shiroruja	2	1	-3.819 ^a	0.000	50.0	S
Aadhman	2	1	-3.690 ^a	0.000	47.2	S
Bowel Habits	2	1	-3.000 ^a	0.003	25.7	S
Stress / Anxiety	2	2	-1.414 ^a	0.157	5.9	NS
Sleep	1	1	-2.236 ^a	0.025	23.8	S

 Table 1 Efficacy Study of Subjective Parameters in Group A

2019 Greentree Group Publishers© IJAPC www.ijapc.com 632



Since observations are on ordinal scale (gradation), Wilcoxon Signed Rank test was used to test efficacy in Group A. From table no. 1it can be observed that P-Values for almost parameters are less than 0.05 (except stress/anxiety). Hence it can be concluded that effect observed in Group A is significant.

Table 2 Efficacy	Study of Sub	jective Parameters	in Group B

Group B	Median		Wilcoxon Signed	P-Value	% Effect	Result
-	BT	AT	RankW			
Utklesha	2	1	-3.742 ^a	0.000	43.8	S
Tikta-Amlodgar	1	1	-3.051ª	0.002	40.7	S
Udar-Anga Gaurav	1	0	-3.000 ^a	0.003	50.0	S
Hridkantha Daha	1.5	1	-3.638 ^a	0.000	48.4	S
Aaruchi	1	0.5	-2.000 ^a	0.046	26.7	S
Shiroruja	1	1	-3.358ª	0.001	57.1	S
Aadhman	1	1	-2.828ª	0.005	33.3	S
Bowel Habits	2	2	-1.732 ^a	0.083	8.8	NS
Stress / Anxiety	2	1	-4.021ª	0.000	63.2	S
Sleep	2	0	-3.787 ^a	0.000	71.0	S

From table no. 2 it can be observed that P-

conclude that effect observed in Group B is significant.

Values for almost parameters are less than

0.05 (except Bowel Habits). Hence it can be

Table 3 Efficacy Study of Subjective Parameters in Group C

Group C	Median		Wilcoxon Signed	P-Value	% Effect	Result
-	BT	AT	RankW			
Utklesha	2	0	-3.946 ^a	0.000	75.0	S
Tikta-Amlodgar	1.5	0	-3.624 ^a	0.000	79.3	S
Udar-Anga Gaurav	1	0	-3.755 ^a	0.000	73.1	S
Hridkantha Daha	2	0	-3.919 ^a	0.000	90.9	S
Aaruchi	1	0	-3.690 ^a	0.000	70.8	S
Shiroruja	1	0	-3.906 ^a	0.000	82.1	S
Aadhman	1	0.5	-3.416 ^a	0.001	65.5	S
Bowel Habits	2	1	-2.828ª	0.005	25.0	S
Stress / Anxiety	2	1	-3.557 ^a	0.000	53.3	S
Sleep	2	0	-3.640ª	0.000	75.9	S

From table no. 3 it can observed that P-Values for almost parameters are less than concluded that effect observed in Group A is significant.

0.05 (except stress/anxiety). Hence it can be

Table 4 Comparis	on among Group	A, Group	B and Group C	
Parameter	Group	Ν	Mean Rank	Kruskall Wallis Test
				1000

	-			Test		
Utklesha	Group A	20	30.93	10.514	0.005	S
	Group B	20	22.45			
	Group C	20	38.13			
	Total	60				
Tikta-Amlodgar	Group A	20	29.35	7.591	0.022	S
	Group B	20	24.25			

P-Value

Result



	Group C	20	37.90			
	Total	60				
Udar-Anga Gaurav	Group A	20	28.50	6.623	0.036	S
	Group B	20	25.38			
	Group C	20	37.63			
	Total	60				
Hridkantha Daha	Group A	20	26.55	12.793	0.002	S
	Group B	20	24.25			
	Group C	20	40.70			
	Total	60				
Aaruchi	Group A	20	29.13	12.514	0.002	S
	Group B	20	22.70			
	Group C	20	39.68			
	Total	60				
Shiroruja	Group A	20	29.35	3.403	0.182	NS
-	Group B	20	26.78			
	Group C	20	35.38			
	Total	60				
Aadhman	Group A	20	33.73	7.595	0.022	S
	Group B	20	22.60			
	Group C	20	35.18			
	Total	60				
Bowel Habits	Group A	20	34.00	4.573	0.102	NS
	Group B	20	25.00			
	Group C	20	32.50			
	Total	60				
Stress/Anxiety	Group A	20	15.65	29.704	0.000	S
-	Group B	20	42.55			
	Group C	20	33.30			
	Total	60				
Sleep	Group A	20	17.63	19.103	0.000	S
-	Group B	20	37.08			
	Group C	20	36.80			
	Total	60				

Since observations are on ordinal scale (gradations), Kruskall Wallis Test was used for comparison amongst three groups. From above table it can be observed that P-Values for almost parameters are less than 0.05 (Except bowel habits). So, it can be conclude that there is significant difference in the effect of Group A, Group B and Group C.Further it is observed that mean rank for Group C is greater than Group A and Group B. Hence concluded that effect observed in Group C is more than Group A and Group B. Followed by Group A has more effect than Group B.

Group A		Mean	Ν	SD	SE	t-Value	P-Value	% Effect	Result
Salivary pH	BT	6.76	20	0.34	0.08	-3.907	0.001	2.07	S
	AT	6.90	20	0.30	0.07	_			
Temperature	BT	98.51	20	0.43	0.10	1.221	0.237	0.04	NS
	AT	98.47	20	0.34	0.08				

Table 5 Test of significance for Objective Parameters for Group A

Pulse Rate	BT	84.60	20	12.26	2.74	0.969	0.345	0.95	NS
	AT	83.80	20	11.09	2.48				
Respiratory	BT	17.45	20	1.61	0.36	1.371	0.186	0.86	NS
Rate	AT	17.30	20	1.45	0.33	_			
Blood Pressure	BT	118.70	20	13.80	3.09	1.509	0.148	1.43	NS
(systolic)	AT	117.00	20	11.83	2.65	_			
Blood Pressure	BT	76.70	20	10.35	2.31	2.269	0.035	2.35	NS
(Diastolic)	AT	74.90	20	8.93	2.00	_			

Since observations are quantitative and sample size is less than 30, use of paired ttest to test significance in Group A is done. From above table it can be observed that P- Value for Salivary pH is less than 0.05. Hence it can be concluded that there is significant change observed in Salivary PH in Group A.

Table 6 Test of significance for Objective Parameters for Group B

Group B		Mean	Ν	SD	SE	t-Value	P-Value	% Effect	Result
Salivary pH	BT	6.88	20	0.18	0.04	-6.282	0.000	2.62	S
	AT	7.06	20	0.17	0.04				
Temperature	BT	98.53	20	0.33	0.07	5.176	0.000	0.19	S
	AT	98.34	20	0.26	0.06				
Pulse Rate	BT	82.50	20	12.86	2.88	5.158	0.000	4.24	S
	AT	79.00	20	10.65	2.38				
Respiratory	BT	17.10	20	1.80	0.40	5.900	0.000	8.48	S
Rate	AT	15.65	20	1.39	0.31				
Blood Pressure	BT	120.60	20	12.60	2.82	4.034	0.001	2.24	S
(systolic)	AT	117.90	20	11.81	2.64				
Blood Pressure (Diastolic)	BT	76.50	20	9.77	2.19	4.222	0.000	2.88	S
(Diastone)	AT	74.30	20	8.88	1.99				

From table no. 6it can be observed that P-Value for all parameters are less than 0.05. Hence it can be concluded that there is significant change observed in all parameters in Group B.

Table 7 Test of significance for Objective Parameters for Group C

Group C		Mean	Ν	SD	SE	t-Value	P-	% Effect	Result
_							Value		
Salivary pH	BT	6.94	20	0.16	0.04	-8.759	0.000	3.31	S
	AT	7.17	20	0.15	0.03				
Temperature	BT	98.46	20	0.31	0.07	4.813	0.000	0.21	S
	AT	98.26	20	0.29	0.06				
Pulse Rate	BT	79.30	20	11.24	2.51	7.000	0.000	4.41	S
	AT	75.80	20	10.46	2.34				
Respiratory	BT	17.55	20	1.82	0.41	7.698	0.000	11.68	S
Rate	AT	15.50	20	1.70	0.38				
Blood Pressure	BT	126.10	20	12.04	2.69	5.048	0.000	4.12	S
(systolic)	AT	120.90	20	12.20	2.73				

2019 Greentree Group Publishers© IJAPC www.ijapc.com 635

Blood Pressure	BT	80.10	20	9.39	2.10	3.370	0.003	4.62	S
(Diastolic)	AT	76.40	20	8.57	1.92				

From table no. 7 it can be observed that P-Value for all parameters are less than 0.05.

Hence can be concluded that there is

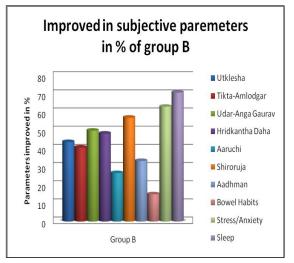
significant change observed in all parameters in Group C.

Table 8 Comparison among Group A. Group B and Group C

Parameter	Group	N	Mean	Std. Deviation	Std. Error	F-Value	P-Value	Result
Salivary pH	Group A	20	0.16	0.14	0.03	1.573	0.216	NS
	Group B	20	0.18	0.13	0.03			
	Group C	20	0.23	0.12	0.03			
Temperature	Group A	20	0.10	0.11	0.03	7.112	0.002	S
	Group B	20	0.21	0.13	0.03			
	Group C	20	0.25	0.13	0.03			
Pulse Rate	Group A	20	3.00	2.20	0.49	0.766	0.470	NS
	Group B	20	3.90	2.47	0.55			
	Group C	20	3.50	2.24	0.50			
Respiratory	Group A	20	0.25	0.44	0.10	24.688	0.000	S
Rate	Group B	20	1.65	0.75	0.17			
	Group C	20	2.05	1.19	0.27			
Blood Pressure	Group A	20	2.30	4.78	1.07	3.269	0.045	S
(Systolic)	Group B	20	2.90	2.79	0.62			
	Group C	20	5.40	4.36	0.97			
Blood Pressure	Group A	20	2.20	3.30	0.74	1.008	0.371	NS
(Diastolic)	Group B	20	2.40	2.11	0.47			
	Group C	20	3.70	4.91	1.10			

Since observations are quantitative, One Way ANOVA test for comparison was used amongst the three groups. From table no. 8it can be observed that P-Values for Temperature, Respiratory Rate and Systolic BP are less than 0.05, shows significant difference in three groups for these parameters.

Graphical Representation of the Data







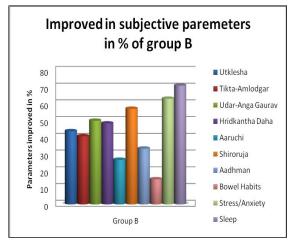


Figure 2

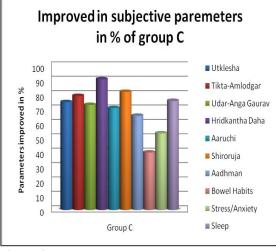


Figure 3

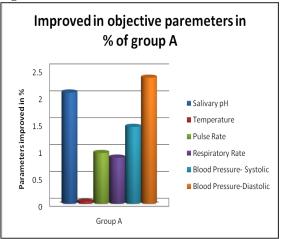
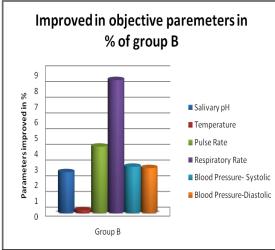
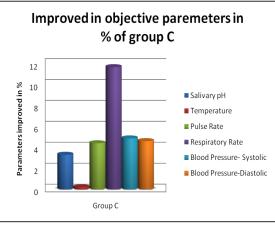


Figure 4









DISCUSSION:

These days, Apathya Aahar Sevan is done in the form of Viruddha, Guru, Snigdha Katu-Amla-Lavana ahara, rasatisevan, Abhishyandi, Pishtanna. Ikshuvikar, Bhrusta, Vidahi, Ati ushna ahara. Which are the classically considered Aharaj Nidan of Amlapitta and seen prominently due to excessive incidence of hoteling, consumption of street food more then 3 - 4 times/week. Canned food or ready to eat food have high amount of preservatives which irritates the esophagus and stomach.



Amongst the Viharaja Hetu - Diwaswap, Vegavidharan, Ratrojagran; Manas Hetus - Chinta, Krodh, Bhaya, Shoka, etc. factors are together responsible for improper digestion, vitiation of doshas, causing Ama and thus aggravating the disease process.

Amlapitta is disease of *Annavaha Strotas* in which there is vitiation of *Pitta* and *Agni*. These are the important factors for pathogenesis of the disease. *Amlapitta* is *Amashayotha Vyadhi* (Ka. Khil. 16-18) and is produced by *Agnimandya*, it is responsible for production of *Ama* which vitiates the *pitta dosha*.⁴

The dravya used in Pathya Aahar have tikta-madhur-kashaya rasa, as per Acharya Kashyap while describing Rasaopyoga in Aahar in Pittaj Vikaar Samanya Chikitsa. Also the prescribed *aahar dravya* have *madhur vipak*, *sheeta virya* and possess properties like *tridoshaghnata* (esp. *pitta doshaghna*). So act as *Shaman Dravya* breaks down the *Samprapti* of *Amlapitta*& yields more effective result.⁴

In Amlapitta, it can be said that the Drava guna of Pitta is increased along with Ushna and *Tikshna Guna*. So here, *tikta rasa* helps in pachan of Sama Pitta, followed by Madhur rasa which helps in Shaman of vitiated Pitta and Kashaya rasa causes shoshan of increased dravata of Pitta, ultimately leading to Pitta shaman.Further,Pathya Aahar Dravya and its probable mode of action are elaborated.5,6

S.no	Varga	Dravya	Properties	Mode of Action
1	<u>SHUKA</u>	Shali, Godhuma, Ragi.	Madhur, Kashaya rasa, sheeta virya and Madhur Vipak; pittaghana property and bruhan.	Low fibre content, and is therefore extremely soothing to the digestive system.
2	<u>SHIMBI</u>	Mudga, masoor,	Madhur rasa, sheeta virya, Laghu and Ruksha guna, pacifies kapha and pitta Dosha.	Trypsin inhibitors, hemagglutinin, tannins, and phytic acid found to have biological function, promoting digestion and eliminating toxins
3	<u>PHALA</u> <u>SHAKA</u>	Kushmanda, Alabo	Tikta rasa - pachan of Pitta in Amavastha, Madhur and kashaya rasa - shaman of Pitta.	Vegetable salts are converted into alkaline carbonates and thus help in correcting acidity.Gives immediate relief in burning sensation in the stomach
4	<u>PATRA</u> <u>SHAKA</u>	Palakya, Tanduliyak, Marish	Madhur, kashaya rasa, sheeta virya and Madhur vipak & have pitta-kaphahar action.Indicated in baddhakoshtha, Ajirna, hasta-pada-netra daha, etc. kashaya rasa - Ruksha guna causes shoshan of increased dravata of Pitta, leading to Pitta shaman.	Green leafy vegetables are rich source of Calcium & other alkaline elements which are essential for preserving the alkalinity of blood.

5	<u>PHALA</u>	Dadhima, Amalaki narikela, Amlaki, anjeer	Madhur rasatmak, shighra tarpan, pacifies daha, saraka property helps in relieving malavashthambha.	Fruits maintainacid – alkaline balance in the body. They neutralize the toxic condition, result from excessive intake of acid forming foods and restore its alkalinity.
6	<u>DUGDHA</u>	Go-dughdha Takra Go-ghruta	Vata-pittahar, Jeevaniya, mrudu Rechak and Rasayan guna Takra - Pachak, Agnivardhak and Pittagna	Milk and its products contains alkaline forming elements it quickly relieves all acid conditions of the system.

ASANAS

A specific posture is essential for the *Pranayam* practice. Hence, subjects were asked to sit in meditative Asanas - *Padmasana* or *Siddhasana* to provide a steady, stable and yet comfortable sitting posture that helps in controlling and concentrating the mind during *Pranayam* for considerably longer duration.⁷

NADI SHODHAN PRANAYAM:

It was advised prior to *Shitali Pranayam*. This is practiced by breathing through the alternate nostrils. This exercise is designed to deactivate *Ida* and *Pingala nadi*. *Prana*(active energy) flows through *Sushumna Nadi* primarily, thus activating the *Kundalini*. *Vayu* cannot enter the *Nadis* if they are full of impurities. So first of all, they should be purified and then any kind of *Pranayam* should be practiced.⁸

SHITALI PRANAYAM:

The references of *Shitali Pranayam* are found in Hath yoga Pradipika, Gheranda Samhita, Shiv Samhita, Anand Kanda, Yogakundalyopanishad Yogashikhopanishad.^{9,10,11,12,13,14}

In Jyotsana Commentary on Hath yoga Pradipika 2/58 the *Rogaghna* properties of *Shitali* have been mentioned. It states that *Shitali Pranayam* acts very well in pacifying the vitiated Pitta. In *Amlapitta, Drava guna* of *pachak Pitta* is increased. Hence, with *Pitta Shamak* property of *Shitali* plays important role in management of *Amlapitta*.¹⁰

and

Gheranda Samhita quotes – *Sadhak* who practices *Shitali Pranayam*, never suffers from *Ajirna* (indigestion) or disorders due to *Kapha - Pitta*.¹¹

Practitioner of *Shitali Pranayam* attains fine control on his thirst and hunger, experiences calmness and peace of mind and mental steadiness, pleasant and energetic feeling after this *Pranayam* are experienced throughout the day.³

In *Shitali Pranayam*, i.e. during conscious breathing neuronal circuit from the cerebral cortex to respiratory centre is activated, i.e. during this act other neuronal circuits which

1

are responsible for causing stress, anger and anxiety may get rest and cerebral function may be modified/ improved.

In normal physiology it is seen sympathetic nerves stimulate entero chromofin cells due to which histamine is liberated, which is a powerful stimulus for acid secretion.¹⁵ After practicing *Shitali Pranayam*, the sympathetic tone is decreased, so the local production of histamine is reduced and ultimately decreased acids secretion is seen helping in pacification of *Amlapitta*.

CONCLUSION

Pathya Aahar in Urdhvag Amlapitta shows significant relief Utklesha, in Tiktamlodgar, Hrid Kantha Daha and Aruchi.Shitali Pranayam helped in reducing Shiroruja, Stress/Anxiety and percentage of sleep disturbances.After comparing the results of the three groups it was seen that Group of Pathya Aahar and Shitali Pranayam showed Significant results both in subjective as well as objective parameters.



REFERENCES:

1. Acharya Charak "Charak Samhita" with Ayurved Dipika commentary by Chakrapani, Ed. by Vd. Yadavji Trikamji Acharya, Chaukhamba Prakashan, Varanasi, 2000.

 Alkalize or Die, Dr. Theodore A. Broody, Jr., 1993, Eclectic Press, Waynesville, NC 28786, page 157.

 Swami Kuvalyananda "Pranayama" Kaivayadham Lonavala,10th Ed

Acharya Kashyap "Kashyap Samhita"
 Hindi commentary by Satyapal
 Bhishagacharya, Chaukhamba Sanskrit
 series, Varanasi.

 H K Bakhru "Foods that Heal" Orient Paperbacks Publications, 28th Print, New Delhi.

6. Kaiyadeva krut

"Pathyapathyavinodhak" Acharya

Priyavrat Sharma, Chaukhamba Orientalia, Varanasi, 1st Ed., 1979.

 B K S Iyengar "Light on Yoga" HarperCollins publisher, 21st Ed 2001.

8. Dr. Makrand M Gore "Anatomy and Physiology of Yogic Practices" New Age Books, Delhi, 4th Ed. Reprint 2010.

9. Maharishi Patanjalimuni "Patanjali Yoga Darshanam" Yogabhashyavritti by Vyaas, Shri Bramhalimuni, Chaukhamba Sanskrit Sansthan, Varanasi, 5th Ed., 1995. 10. Shri Swatmaram Yogi "Hath yoga Pradipika" with Jyotsana Tika, Edited by Kshemraj, Venkateshwar Press, Mumbai, 1st Ed., 1985

11. Gherandacharya "The Gheranda Samhita" Translated by Ravi Bahadur Sirsa Chandra, edited with notes and introduction by J L Gupta, Published by Chaukhambha Sanskrit Pratishthana, Delhi 2003

12. Mahayogi Abhinath Shrimahadev"Shiv Samhita" Edited by – Dr. Keshav R.Joshi Siddhayoga Publication, Pune, 1992.

13. Shri Bairavoktam Siddhi Prada
"Ananda Kanda" Hindi Translation, Prof.
Siddhi Nandan Mishra, Chaukhamba
Orientalia, Varanasi, 1st Ed., 2008.

14. T R Srinivas Ayyangar "The Yoga Upanishad" Adyar Library, Adyar, Madras 1938.

15. Arthur C. Guyton and John E Hall, Text Book of Medical Physiology Elsevier, New Delhi, 11th Ed Reprint 2008.Pg, 797