

AN OBSERVATIONAL CLINICAL STUDY TO EVALUATE ASATMYA ROGA NIDANA IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)

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Article Received on
10 June 2022,

Revised on 30 June 2022,
Accepted on 20 July 2022

DOI: 10.20959/wjpr202211-25041

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ABSTRACT

COPD is a disease of increasing public health importance around the world. GOLD estimates suggest that COPD will rise from the sixth to the third most common cause of death worldwide by 2020.^[1] The disease is frequently encountered in the middle age group and is rare below the 35 years. *Satmya* is defined as one which gives *sukha* to the body and it can be considered as *Upashaya*.^[2] *Asatmya* or *Anupashaya* is considered as opposite to *Satmya*.^[3] Not only considering chronic cigarette smoking as a prime cause for COPD, there is also chance of indulging in specific *ahara* and *vihara* which acts as *Asatmya* to the person can also end up in *Asatmya roga*. Hence an attempt is made to understand the *Asatmya nidana* in COPD. **Objective:** To evaluate the possible *Asatmya nidana* in the development of chronic obstructive pulmonary disease. **Methods:** In this observational study, 30 subjects diagnosed with the COPD were selected. The probable incidence of *nidana* (cause), in patients were assessed through a questionnaire developed for the study. The recorded data were analysed with

descriptive statistics. **Results:** *Aharaja nidana* acts as *Dosha hetu* predominantly causing *Vata Kapha Parakopa*. *Sheetapana*, *sheeta sthana*, *raja*, *dhooma*, *anila*, *diwaswapna*, *pratishyaya*, *shwasa* acts as *Vyadhi hetu*. *Raja*, *dhooma*, *sheetapana*, *sheeta sthana*, *abhishyandhi*, *guru ahara*, *dadhi*, *ksheera* acts as *Ubhaya hetu*. **Conclusion:** *Bahya hetu*

(external factors) triggers *dosha kopa* or causes *dhatu pradooshana*. In COPD patients, *Aharaja nidana of kasa/shwasa* are similar to that of *rasa dushti nidana* and directly causes *dhatu pradooshana* in the body even.

KEYWORDS: COPD; Satmya; Asatmya; Nidana.

INTRODUCTION

Respiratory system is in continuous contact with the external environment from birth to the entire lifetime. Various factors like dust, smoke, irritants in environment will have its influence on respiratory system. Similarly, body is also influenced by food which is consumed by the person. Not all human beings are alike. The response of the body to the external milieu varies in each and every person. Certain factors, like change in environment and food items are tolerated by some persons and on the other hand it will act as allergens to other. These factors act as *Asatmya nidana*. Chronic obstructive pulmonary disease has been defined by Global Initiative for Chronic Obstructive Lung Disease, an international collaborative effort to improve awareness, diagnosis, and management of COPD, as a disease state characterized by airflow limitation which is not totally reversible.^[4] After exposure to variety of external factors, the wholesome response of the body is known to be *Satmya*.^[5] Contrary to this, response of the body which acts as unwholesome when exposed to external factors is known to be *Asatmya*. From Ayurveda point of view COPD can be termed as disorder of *Pranavaha srotas*, as etiological factors and clinical features described in ayurvedic classics for *Pranavaha srotodusti* are nearly similar with those of COPD and occurs usually in conditions of *Kasa* or *Tamaka shwasa*.

AIM AND OBJECTIVES

The present study clinically assessed *Asatmya nidana* in diagnosed COPD patients.

MATERIALS AND METHODS

Source of data

30 patients diagnosed with COPD attending OPD & IPD of Sri Dharmasthala Manjunatheshwara Ayurveda Hospital, Udupi were selected for the study.

Study design

It was an observational study on 30 patients diagnosed with a COPD, using the diagnostic parameters. A detailed history about their regular food habits and daily regimen in the form

of questionnaire was taken to assess the probable incidence of *Nidana* and the recorded data were analysed with descriptive statistics.

Inclusion criteria

1. In this case diagnosed COPD patients were selected.
2. Patients aged between 16-60 years.
3. Patients irrespective of sex are selected for the study.

Exclusion criteria

1. Patients with systemic illness.
2. Patients with chronic infective and neoplastic respiratory disorders.

Assessment criteria

- Assessment of *Asatmya nidana* in patients of chronic obstructive pulmonary disease was done using validated questionnaire.
- Frequency of each *nidana* was assessed through Likert-type scale.

Table No. 1: Likert like scale.

Frequency	Likert scale	No. of days / week
Never	0% chance	Not more than one day in a week
Rarely	10% and above chance I would have	1 or 2 days in a week
Sometimes	50% and above chance I would have	2 - 4 days in a week
Often	Frequently about 70% of chances I would have	5-6 days in a week
Always	In about 90% and above of chances I would have	6-7 days in a week

RESULTS

The observations and results obtained after the evaluation of *Asatmya nidana* in COPD patients are as follows.

Table No. 2: Aharaja Nidana of Asatmya in COPD patients.

Sl. No	Asatmya in Shwasa and Kasa w.r.t Dwadasha ahara varga	Never	Rarely	Sometimes	Often	Always
1	<i>Shami varga</i> a) <i>Nishpava</i> (hyacinth bean)	40%	50%	10%	0%	0%
	b) <i>Masha</i> (black gram)	0%	6.7%	33.3%	50%	10%
2	<i>Shooka varga</i> a) <i>Godhuma</i> (wheat)	0%	0%	10%	73.3%	16.7%
	<i>Mamsa varga</i> a) <i>Matsya</i> (fish)	36.7%	0%	3.3%	43.3%	16.7%
3	b) <i>Kukkutanda</i> (Egg)	33.3%	6.7%	16.7%	43.3%	0%

4	<i>Shaaka varga</i>					
	a) <i>Upodika</i> (spinach)	0%	6.7%	36.7%	43.3%	13.3%
	b) <i>Sarshapa</i> (mustard)	0%	0%	0%	20%	80%
	c) <i>Kalaya</i> (peanut)	33.3%	56.7%	10%	0%	0%
5	<i>Phala varga</i>					
	a) <i>Tumbi phala</i> (bottle gourd)	13.3%	56.7%	30%	0%	0%
6	<i>Gorasa varga</i>					
	a) <i>Dadhi</i> (curd)	0%	0%	26.7%	26.7%	46.7%
	b) <i>Ksheera</i> (milk)	0%	6.7%	20%	50%	23.3%

Table No. 3: *Viharaja Nidana* of *Asatmya* in COPD patients.

	Never	Rarely	Sometimes	Often	Always
<i>Dhoomopaghata</i>					
Domestic	10%	3.3%	36.7%	23.3%	26.7%
Automobile	0%	0%	20%	26.7%	53.3%
Industrial	43.3%	20%	0%	10%	26.7%
Smoking	0%	6.7%	10%	33.3%	50%
<i>Raja sevana</i>					
Cement/granite quarrying	43.3%	20%	0%	10%	26.7%
Sweeping/dusting	0%	0%	20%	36.7%	43.3%
Animal dander	13.3%	0%	10%	50%	26.7%
<i>Vyayama</i>	86.7%	13.3%	0%	0%	0%
<i>Sheeta sthana</i>	0%	0%	10%	60%	30%
<i>Sheetambu sevana</i>	0%	0%	10%	60%	30%
<i>Vegadharana</i>					
Mala	20%	53.3%	26.7%	0%	0%
Mootra	3.3%	26.7%	56.7%	13.3%	0%
Kshavathu	23.3%	30%	46.7%	0%	0%
<i>Adhwa</i>	6.7%	43.3%	23.3%	23.3%	3.3%
<i>Kantauraspratighata</i>	0%	43.3%	46.7%	6.7%	3.3%
<i>Divaswapna</i>	10%	46.7%	30%	13.3%	0%
<i>Ratri jagarana</i>	0%	36.7%	53.3%	10%	0%
<i>Anila</i>	0%	16.7%	23.3%	26.7%	33.3%
<i>Anala</i>	0%	23.3%	20%	30%	26.7%

DISCUSSION

This *Satmya* and *Asatmya* may be developed from birth or later in the life. Thus, categorising it into innate and acquired. Both *Satmya* and *Asatmya* has an influence on various factors like *Prakruti*, *Vaya*, *Rutu*, *Desha*, *Kala*, and *Vyadhi*. A state of exaggerated or altered immune response to an antigen is allergy and it is synonymous to hyper sensitivity reactions. Not only considering chronic cigarette smoking as a prime cause for COPD, there is also chance of indulging in specific *ahara* and *vihara* which acts as *Asatmya* to the person can also end up in *Asatmyaja roga*.

The *nidana* can be understood as *bahya hetu* and *abhyantara hetu*. Here *bahya hetu* detailed analysis done. *Bahya hetu* acts either as *dosha hetu*, *vyadhi hetu* and *ubhaya hetu*. *Dosha hetu* includes *viprakrishta* and *vyabhachari*. *Vyadhi hetu* includes *pradhanika*, *utpada* and *vyanjaka* and *ubhaya hetu* includes both etiological factors from *dosha* and *vyadhi hetu*.

Masha (Black gram): *Masha* having *Snigdha*, *Guru guna*, and *Madhura rasa* which acts as *kapha vardhaka* also *kaphakaraka*.^[6] So it does *dosha kopa* and also acts as *asatmya*.

Matsya (Fish): *Matsya* is *kapha karaka*.^[7] It is *abhishyandhi*, *picchila*, *shleshmala*, *Madhura*, *guru*, *snigdha*, *vahni Saada*.^[8] Hence, it acts as both *dosha prakopaka* and *asatmya*.

Upodika (Spinach): *Upodika* acts as *viprakrushta hetu*. It is having quality of *shleshma vardhini*, *madhura rasa* and *vipaka*, *sheeta virya* also *sara* and *guru guna* which acts as *asatmya*.^[9,10] *Upodika* is a seasonal vegetable, whenever person will eat frequently it does *kapha vardhaka*. Hence, it acts as both *dosha kopa* and *asatmya*.

Dadhi (Curd): *Dadhi* acts as *viprakrushta hetu* and *vyanjaka hetu*. It is *madhura rasa*, *madhura vipaka*, *snigdha* and *guru guna* which acts as *kapha vardhaka*, and it is *abhishyandhi*.^[11] Hence it does *dosha kopa* and also acts as *asatmya*.

Ksheera (Milk): *Ksheera* acts as *viprakrushta hetu*. It is having qualities of *Madhura rasa*, *Madhura vipaka*, *sheeta virya*, *snigdha*, *bahala*, *shlakshna*, *picchila*, *guru* and *manda guna*.^[12] Hence it acts as *kapha dosha prakopaka* as well as *asatmya*.

Dhoomopaghata (Smoke): *Dhooma* could be domestic smoke like exposure of biomass smoke or natural gas frequently during cooking, automobile smoke, industrial smoke, and mainly tobacco smoking-cigarette. Number of cigars per day and duration of smoking also impacts on severity of illness. In the present study, majority were exposed to auto mobile pollution. Most of the house wives were exposed to domestic smoke and labours were frequently got exposed to industrial pollution. *Dhooma* acts as *vyanjaka hetu*, *vyadhi hetu* and *asatmya* causing impairment in *vata dosha*. *Dhooma* can be considered as important *asatmya* which is capable of producing bronchospasm.

Raja sevana (Dust): *Raja* can be compared to dust in working environment like cement, granite quarrying, sweeping, farming, mining, animal dander, feathers, pollens and fungus spores.

In the study majority of the patients were always and often used to get exposure to *raja* and it act as *vyanjaka hetu*, *vyadhi hetu* and *asatmya*.

Vyayama (Exercise): *Vyayama* defines which creates exertion in body.^[13] From this context we can understand that all activities which create *sharirika parishrama* as *vyayama*.

Majority were not indulging in *vyayama* as it increases the symptoms. It is said that *ati vyayama* leads to *kasa*, *shwasa* and *shrama*.^[14] Hence, *vyayama* acts as *dosha kopa* and *asatmya*.

Sheeta sthana and Sheetambu

Sheeta sthana and *sheetambu* acts as *vyanjaka hetu* and also *vyadhi hetu*. *Sheeta sthana* leads to *Vata Prakopa* as well as *Kapha Prakopa*. *Sheeta sthanas* like exposing to cold climate, rainy season, living nearby rivers, living in hill stations where majority patient's symptoms were triggered.

Sheeta ambu paana also leads to *vata prakopa* and here *sheeta ambu* means cold water intake, cold beverages, cold items intake which aggravates the symptoms.

As more subjects were belonging to *anupa desha*, the *anupa desha jala* is *abhishyandhi*, *swadu*, *snigdha*, *ghana*, *guru*, *agnisaada*, *kaphavruddhi*.^[15] Hence, *sheeta sthana* and *sheetambu* does *vata* and *kapha prakopa* and also acts as *asatmya*.

Anila (Breeze): It is said that the wind which comes from *poorva disha* is not good for health. Frequent exposure to *poorva vata* leads to *vyadhis*.^[16] It acts as *vyadhi hetu*.

In this study frequently exposing to breeze residing near beach/hilly areas indicating exposure to *anila*. This acts as *asatmya* and *dosha kopa*.

Anala (Sunlight): *Poorva vata* and *atapa* is considered as not good for health.^[17]

It acts as *vyadhi hetu*. *Pitta dosha* does *rukshata* and *vata prakopa* takes place. Hence, it does *dosha kopa* and acts as *asatmya*.

CONCLUSION

Asatmya nidana are understood under the heading of *dosha hetu*, *vyadhi hetu* and *ubhaya hetu*. All the *nidanas* included in *hikka shwasa adhikara* are to be considered as the *hetu* for *Kasa roga*. Hence those *nidanas* were enlisted and analyzed. In the present clinical study, it is

observed that higher incidence of *Dosha hetu* (*viprakrushta* and *vyabhichari*), such as *Ahara dravya* like *ksheera*, *dadhi*, *upodika*, *matsya*, *sheetambu sevana*, *atimadhura*, *snigda*, *guru*, *viruddha* and *abhishyandhi ahara* and *Viharas* like *dhooma sevana*, *raja sevana*, *sheeta sthana*, *vyayama*, *adhwa* was practiced. In most of the patients *Vyadhi hetu* like *pratishyaya*, *shwasa* were observed as a development of *Kasa*. Also, both *vataja* and *kaphaja nidanas* were acted like *utpadaka hetu* and *dhooma sevana*, *raja sevana*, *sheeta sthana*, *vyayama*, *sheetambu sevana*, *ksheera*, *dadhi* were acted as *vyanjaka hetu*. *Raja*, *dhooma*, *sheetambu sevana*, *sheeta sthana* were acted as *Ubhaya hetu* in all patients.

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