

## ETIOLOGICAL FACTORS OF SHOTHA: A NIDANATMAKA SURVEY STUDY

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## ABSTRACT

*Nidana* is defined as the fundamental or root cause of a disease. Avoidance of *Nidana* is the basis of *Chikitsa*. Among the countless number of ailments in this world a few can be identified as very common and very recurrently affecting, where *Shotha* is also one of those. In *Ayurveda*, *Shotha* is described as an independent disease and also as a symptom of many diseases. When vitiated *Vayu* enters in *Bahya Sira* and vitiates *Kapha*, *Pitta* and *Rakta*, then these vitiated *Dosha* obstructs the passage of *Vayu* leading to *Unmarga Gamana*, which results in *Shotha*. In the present study an attempt has been made to find out the *Nidana* of *Shotha*. A structured questionnaire was administered to each patient, to collect data on Socio-demographic profile, *Ahara-Satmya* (Dietary Pattern) and other *Ayurveda* variables. It was found in the study that people taking *Guru Bhojana*, *Ati Ushna Ahara*, *Ati Snigdha Ahara*, *Amla Rasa*, *Asatmya Bhojana*, *Dadhi Sevana*, *Mrittika Bhakshana*, *Shaaka Sevana* are more susceptible to *Shotha*. *Mithya Upachara* after *Panchakarma*, *Viruddhahara*, and never undergoing *Panchakarma*, *Abhojana*, *Upavasa*, weakness, abortion, anaemia and trauma are also proved as an etiological factor of *Shotha*. One must avoid use of *Nidana* (*Mithya Ahara-Vihara*) to remain healthy.

KEYWORDS: Shotha, Nidan, Ayurveda, Dosha.

## INTRODUCTION

*Nidana Panchaka* is the main diagnostic tool for *Roga Pareeksha*,<sup>[1]</sup> Apart from diagnosing a disease, it also plays a key role in planning the treatment of disease. *Nidana*, the foremost component of *Nidana Panchaka*, not only gives the knowledge of causative factors of a disease,<sup>[2]</sup> but also helps in treatment by avoiding them. *Acharya Sushruta* has mentioned that *Nidana Parivarjana* (avoidance of causative factors) is the basis of *Chikitsa*.<sup>[3]</sup> Since, the prevention of occurrence of disease is simple rather than treating the patient after developing disease; survey study was done to bring out etiological factors of *Shotha* into light, with the help of questionnaire. Survey study is very useful tool to gather information about various perspectives of disease. Among the countless number of ailments in this world a few can be identified as very common and very recurrently affecting, where *Shotha* is also one of those.

In *Ayurveda*, *Shotha* is described as an independent disease and also as a symptom of many diseases. When vitiated *Vayu* enters in *Bahya Sira* and vitiates *Kapha*, *Pitta* and *Rakta*, then these vitiated *Dosha* obstructs the passage of *Vayu* leading to *Unmarga Gamana*, which results in *Shotha*.<sup>[4]</sup> In Modern Science, *Shotha* can be co-related to Inflammation. It is a self protective

response of vascularised tissue to infections and damaged tissues that brings cells and molecules of host defence from the circulation to the sites where they are needed, in order to eliminate the offending agents. Though it is a part of host defence mechanism, when it becomes severe it turns out to be a hopeless condition which causes tissue damage.<sup>[5]</sup>

*Nidana* of *Shotha* has been mentioned by our *Acharya*. Here an attempt has been made to re-validate the old facts that how many patients develop *Shotha*, due to intake of *Ahara* and *Vihara* *Nidana*.

## MATERIAL AND METHODS

200 patients of *Shotha* between age group of 15-80 years of either sex were randomly selected in *Nidanatmaka* study. The subjects were selected from the pool of the patients reporting to OPD/ IPD/ Laboratory of National Institute of Ayurveda, SSBH Kishanpole, and Satellite Hospital Jawaharnagar Jaipur and various camps organized by NIA. A structured questionnaire was administered to each patient of *Nidanatmaka* survey to collect data on Socio-demographic profile, *Ahara-Satmya* (Dietary Pattern) and *Satva* (Mental status) and other *Ayurvediya* variables.

## RESULTS

### Demographic data

It was found in the survey study that maximum patients (36%) suffering from *Shotha* belonged to age group 51-60 yrs. 59% patients were female. 88% were hindu, 62% were vegetarians, 36% were illiterate, 48% and 45% patients belonged to lower middle class and lower class

respectively. On *Asana Pareeksha* of 200 patients, 36% patients gave the history of *Vishamashana*, 27.5% gave the history of *Samashana*. Among total 200 patients, maximum 62% were having *Mandaagni*. When asked about dominant *Rasa* in diet, 50% were found to take *Lavana Rasa* dominantly in diet.

**Table 1: Showing percentage of patients doing *Aaharaja Nidana Sevana*.**

S. No.	Nidana	Percentage of patients doing <i>Nidana Sevana</i>				
		Never	Rarely	Sometimes	Often	Constantly
1.	<i>Guru Bhojana</i>	01	20	45	24	10
2.	<i>Ati Ushna Aahara</i>	04	23	33	31	9
3.	<i>Ati Snigdha Aahara</i>	01	13	35	34	17
4.	<i>Amla Rasa Sevana</i>	00	31	30	27	12
5.	<i>Dadhi Sevana</i>	03	18	33	28	18
6.	<i>Mrittika Bhakshana</i>	98	00	00	02	00
7.	<i>Shaka Sevana</i>	00	00	04	15	81
8.	<i>Viruddhahara</i>	42	1.5	39	17.5	00
9.	Skip bath ( <i>Deha Ashuddhi</i> )	33	50	16	01	00
10.	<i>Panchakarma</i>	77	19	04	00	00
11.	Physical activity	00	00	12	22	66
12.	<i>Abhojana</i> (Skips meal)	22	55	18	05	00
13.	<i>Upavasa</i>	43	22	24	11	00

**Table 2: Showing percentage of patients doing *Viharaja Nidana Sevana*.**

S. No.	Nidana	Yes	No
1.	Abortion	8	92
2.	Anaemia	28	72
3.	Trauma	17	83

*Guru Bhojana*: Among total 200 patients, 45% were found to take *Guru Bhojana* sometimes only, while 24% were often consumers followed by 20% rare consumers, 10% patients were constant consumers of *Guru Bhojana* and 1% of the total patients never took it.

*Ati Ushna Aahara*: It is evident from the table that among total 200 patients, 33% were found to take *Ati Ushna Aahara* sometimes, while 31% were often consumers followed by 23% rare intakers, 9% were constant consumers and 4% of the total patients never took it.

*Ati Snigdha Aahara*: Among total 200 patients, 35% were found to take *Ati Snigdha Aahara* sometimes only, while 34% were often consumers followed by 17% of constant intakers, 13% patients were rare consumers of *Ati Snigdha Aahara* and 1% of the total patients never took it.

*Amla Rasa*: Among total 200 patients, 31% were found to take *Amla Rasa* rarely while 30% were sometime consumers followed by 27% of often intakers, 12% patients were constantly consuming *Amla Rasa*.

*Dadhi Sevana*: Among total 200 patients, 33% were found to take *Dadhi* sometimes only, while 28 % were

often consumers followed by 18% of often and constant intakers and only 3% patients never took it.

*Mrittika Bhakshana*: Among total 200 patients, 98% had never eaten *Mrittika*, only 2% patients were in habit of taking it often.

*Shaka Sevana*: Among total 200 patients, 81% were found to take *Shaka* constantly followed by 15% often consumers and 4% patients took it sometimes.

*Viruddhahara*: Among total 200 patients, 42% gave the history of never taking *Viruddhahara* followed by 39% and 17.5% taking it sometimes and often respectively while 1.5% were rare consumers.

Skip bath: Among total 200 patients, 50% were found to skip bath rarely but 33% never skipped bath. 16% patients sometimes skips bath and only 1% skip it often.

*Panchakarma*: Among 200 patients, majority of the patient's i.e. 77% had never undergone the procedure of detoxification (*Panchakarma*). The patients who had undergone this procedure rarely were 19% and only 4% patients were found to have this procedure sometimes. No patients were found to have the procedure often and constantly.

Physical activity: Among 200 patients, majority of the patient's i.e.66% were found constantly doing physical activity while 22% were found to do it often followed by 12% doing it sometimes. None of the patient was found performing physical activity rarely or never.

*Abhojana*: Among 200 patients, majority of the patient's i.e.55% were found to skip meals rarely while 22% gave history of never skipping meals followed by 18% skipping it sometimes and 5% skipping often. None was found to skip meal constantly.

*Upavasa*: Among 200 patients, majority of the patient's i.e. 43% were found to do fast never, 24% found to do it sometimes while 22% were found to fast rarely followed by 11% were.

*Vishama Prasuta* (Abortion): Among 200 patients, majority of the patient's i.e. 92% gave the history of never had abortion while 8% have undergone abortion in the near past.

*Paandu* (Anaemia): Among 200 patients, majority of the patient's i.e.72% were not suffering from anaemia while 28% were found to suffer with anaemia.

*Aaghaataja* (Trauma): Among 200 patients, majority of the patient's i.e. 83% gave the history of no recent trauma while 17% met with trauma recently.

Sign and symptoms of *Shotha* (Inflammation):Among 200 patients, majority of the patient's i.e. 93% were complaining of *Gaurava* in affected body part, 98% were found complaining of *Utsedha*, 60% presented with *Ushma* (increased temperature), 11% patients were having the complaint of *Siratanutva*, 49.5% were found not having complaint of *Angavivarnata*, 33% have complaint of increased redness in involved area, 86% were found to suffer with pain,majority of the patient's i.e. 55% had complaint of loss of function of affected area/joint.*Gaurava*, *Utsedha*, *Ushma*, *Angavivarnata*, Pain was commonly present in *Shotha* patients. Symptom *Siratanutva* was present in few patients only.

## DISCUSSION

Many factors were found affecting the health of patient. Elderly age group, Females, Hindu community, Vegetarians, Illiterate people, lower middle class and lower class are more susceptible to *Shotha*. Some inflammatory diseases such as Rheumatoid arthritis are common among elder people and in females. So, dominance of elder age group and females was found in the study. But dominance of Hindu and vegetarians may be due to the pattern of geographical distribution of study site. Stressful life style, lack of awareness about healthy diet could be the reason of greater incidence in illiterate and lower class people.

On *Ashana Pareeksha* of 200 patients, 36% case gave the history of *Vishamashana* &27.5% gave the history of

*Samashana*. According to *Ayurveda*, dietary habit like *Vishamashana* (36%) and *Samashana* (27.5%) are the root cause of *Ama* and *Sanga Pradhana Vyadhi*. Irregular habit of diet leads to vitiation of *Vata* which in turn vitiates all other *Dosha* and cause *Shotha*.

Out of 200 patients, maximum 62% were having *Mandagni*, 23.5% patients were having *Samagni*,14% having *Vishamagni* and only 1% patients were having *Teekshnagni*. *Mandagni* leads to improper digestion which results in to *Amotpatti*. *Ayurveda* believes that "Ama" is the root cause of several diseases since it blocks important micro-channels (*Srotasa*) which nourish tissues (*Dhatu*). Excessive "Ama" can circulate and interact with excretory products to produce a reactive and toxic form with antigenic and pro-inflammatory properties. This form of "Ama" can potentially disrupt the immune system and increase severity of the initial disease. In this context, it is intriguing to note that modern science also found that chronic inflammation may be caused by non-digestible particles.

Majority of patients i.e. 50% were consuming *Lavana Rasa*, 19% patients were habituated to *Katu Rasa*, 16% were consuming *Madhura Rasa* and 7.93% patients were taking *Amla Rasa*. Excess intake of *Lavana Rasa* has been mentioned in the *Nidana* of *Shotha*.

In the *Nidanatmaka* survey study,45% and 24% people were found to take *Guru Bhojana* sometimes and often respectively, 33 and 31% patients were found to take *Ati Ushna Aahara* sometimes and often respectively,35% and 34% patients were found to take *Ati Snigdha Aahara* sometimes and often respectively, 30% and 27% patients were found to take *Amla Rasa* sometimes and often respectively, 33% and 28% patients were found to take *Dadhi* sometimes and often respectively, only 2% patients were found having habit of *Mrittika Bhakshana*, 39 % and 17.5% were found to take *Viruddhahara* sometimes and often, 16% patients were found to skip bath sometimes (doesn't go for *Shareera Shuddhi*), 77% had never undergone the procedure of detoxification (*Panchakarma*), 12% patients were found to do physical activity sometimes, 18% patients gave the history of skipping meals sometimes (*Abhojana*), 24% patients were found to do fast sometimes (*Upavaasa*).

The present study was focused to find out the risk factors (*Nidana*) of *Shotha*. A risk factor is any attribute, characteristic or exposure of an individual that increases the likelihood of developing a disease or injury. Identifying risk factors is an important step in the prevention of development of the disease. Risk factor is a variable that is quantitatively associated with a disease. Direct alteration of the risk factor alters the risk of outcome.

## CONCLUSION

The person taking *Guru Bhojana, Ati Uṣṇa Ahara, Ati Snigdha Ahara, Amla Rasa, Asatmya Bhojana, Dadhi Sevana, Mrittika Bhakshana, Shaaka Sevana* are more susceptible to *Shotha*. *Mithya Upachara* after *Panchakarma, Viruddhahara*, and never undergoing *Panchakarma, Abhojana, Upavaasa*, weakness, abortion, anaemia and trauma are also proved aetiological factors of *Shotha*. One must avoid use of *Nidana (Mithya Ahara - Vihara)* to remain healthy.

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