



A STUDY ON THE EFFECT OF AHARAJA NIDANAS ON CHILDHOOD ASTHMA IN AYURVEDA W.S.R. TO SWASA ROGA.

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ABSTRACT

WHO defines any combination of cough, wheeze, shortness of breath and chest tightness as bronchial asthma specially in children. There is no direct nomenclature mentioned in Ayurveda for childhood asthma. But, there are references of shwasa roga mentioned in Ayurveda which can be correlated with childhood asthma. The present study has been made for ruling out the possible aetiological factors mentioned in Ayurveda (aharaja nidan) w.s.r to modern day food items. The study was carried out on 30 patients of bronchial asthma of age group 2 – 16 years in a specially designed proforma. After assessing all the aetiological factors, the dietary factors responsible for childhood asthma are being evaluated.

KEYWORDS : Wheeze, Shortness Of Breath, Chest Tightness, Bronchial Asthma, Shwasa.

INTRODUCTION:

Childhood asthma is characterised by increased responsiveness of the airways to various stimuli. Experts sometimes name childhood asthma as 'reactive airway disease' or 'bronchiolitis' when talking about wheezing with shortness of breathing or cough in infants and toddlers'. Among India's 1.31 billion people about 6% of children and 2% of adults have asthma, showing steady increase in prevalence both in developing and developed countries².

Childhood asthma has not been directly mentioned in Ayurveda classics. So, after observing the signs and symptoms of the disease, it can be correlated with *Tamaka Shwasa Roga* as per Ayurveda³.

Childhood asthma could not be satisfactorily controlled with medicines till date. But, in this context alternative treatment like Ayurveda may be helpful to prevent and control the disease. Hence, this study was carried out to find out role of *aharaja nidanas* in causation of *swasa roga* in children.

MATERIALS & METHODS:

A clinical study was done on 30 patients of childhood asthma at Govt. Ayurvedic College Hospital, Guwahati – 14, Assam (India) as per necessary formalities under strict protocol to prevent bias and to reduce the error in the study. Detailed history regarding the diet (*Achar*) and as mentioned in Ayurveda were taken into consideration in a specially designed proforma. All the patients diagnosed as childhood asthma between 2 to 16 years of age were included in the study excluding the critically ill patients.

Assesment Criteria:

- All the specific *aharaja hetus* of *shwasa vyadhi* mentioned as per *Charak Samhita* were taken under consideration.
- For assessment of intake, food frequency questionnaire for a period of seven days have been employed as follows,
 - a) Frequency of intake once in a month = 0
 - b) Once in a week = 1
 - c) 2 – 3 times in a week = 2
 - d) 4 times in a week = 3
 - e) 5 times in a week = 4
 - f) Everyday intake = 5
- For assessment, the *Aharaja nidanas* has been put in a specially designed proforma in terms of modern day foods.
- Data above 50% of occurrence rate have been taken into consideration for the study.

OBSERVATION AND STATISTICAL ANALYSIS:

The data of subjective and objective parameters were tabulated and analysed using appropriate statistical tools.

Table : 01 Prevalence of Aharaja Nidanans in the study

Sl. No.	Aharaja Nidan4	Modern day food/food product	No. of observations	Perchant age (%)
1.	Sheetam bu pana	Excessive intake of cold water	0	0
2.		Cold drinks	2	6.6
3.		Fruit juices	8	26.6
4.		Ice cream	2	6.6
5.		Cold custard	8	26.6
6.	Guru Bhojana	Chicken curry/ butter masala etc.	10	33.3
7.		Deep fried/oily food recipes	4	13.3
8.		Paneer	2	6.6
9.		Sweets/ Kulfi	6	20
10.		Chocolates	16	53.3
11.		Ksheer	0	0
12.		Malpua	0	0
13.		Dry fruits	2	6.6
14.		Recipes prepared from Ghee/Butter	4	13.3
15.		Peanut butter	4	13.3
16.		Caramel	4	13.3
17.		Buffalo milk	0	0
18.		Black gram	0	0
19.		Sugarcane juice	0	0
20.		Sandwich	10	33.3
21.		Banana/ Coconut	6	20
22.	Abhishyandi bhojan	Curd	0	0
23.		Buffalo milk	0	0
24.		Bread	10	33.3
25.		Black gram	0	0
26.	Ruksha bhojana	Excessive intake of dry food	0	0
27.		Chips	18	60
28.		Mixture/ Bhujia	12	40

29.	Vistambhi ahara	Slowly digested food that produces bloating abdomen	0	0
30.		Kabuli chana	4	13.3
31.		Rajmah	2	6.6
32.		Dry peas	0	0
33.		Lubhia	0	0
34.	Vidahi ahara	Spicy foods	4	13.3
35.		Chilli Chicken	2	6.6
36.		Chowmin	4	13.3
37.		Fried rice	6	20
38.		Burger	2	6.6
39.		Pizza	2	6.6
40.		Shingra/ Kachoudi	6	20
41.		Sandwich	4	13.3
42.		Sauce	10	33.3
43.		Soy milk	0	0
44.		Aloo chat/ Papdi chat etc.	0	0
45.		Phuska (Pani puri)	0	0
46.		Momo	2	6.6
47.		Pickles	2	6.6
48.	Jalaja mamsa	Meat of aquatic animal	8	26.6
49.		Fish	8	26.6
50.		Duck	0	0
51.	Anupa mamsa	Mutton	2	6.6
52.		Pork	2	6.6
53.		Duck	0	0
54.		Local chicken	8	26.6
55.		Beef	0	0
56.	Dadhi	Curd	2	6.6
57.	Ksheera	Payas	2	6.6
58.	Shaluka	Rhizome of lotus	0	0
59.	Masha	Black gram	0	0
60.	Nishpava	Beans	0	0
61.	Vishamasana	Irregular dietary habit	0	0
62.	Pinyaka	Tilakitta	0	0
63.	Tila taila	Sesame oil	0	0
64.	Pista anna	Cake	8	26.6
65.		Pastry	6	20
66.		Pasta	0	0
67.		Biscuits	18	60
68.		Bread	6	20

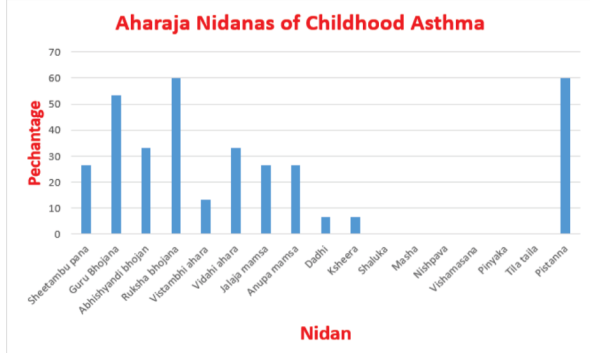


Fig. 2 : Prevalence of Aharaja Nidan in Childhood Asthma as per Ayurveda (n=30)

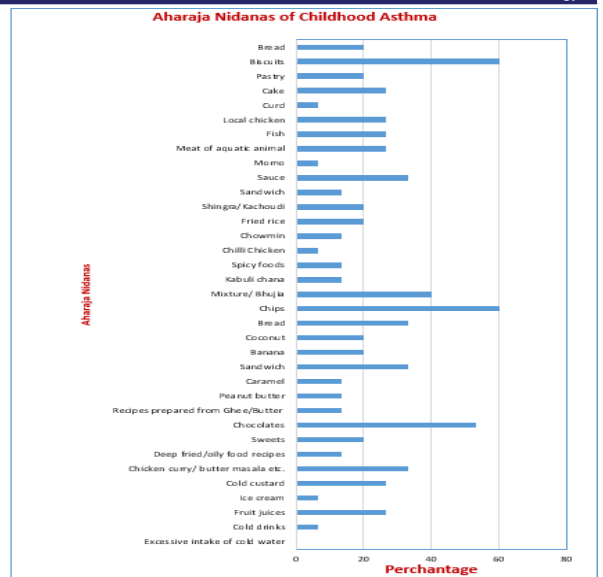


Fig. 2: Showing percentage of observations of Aharaja Nidan (n=30)

DISCUSSION:

A. Discussion on Aharaja Nidan:

Analysis on Aetiological factor based on food habit:

Over 68 varieties of different food products were evaluated. Study shows consumption of Potato chips (60 %) and Chocolates (53 %) have the highest incidence rates. These Hetus (aetiological factors) seem to be commonest in modern days. Most of the children consume these hetus but symptoms of childhood asthma may not appear immediately. But, the after affect cannot be ruled out. Hence, these dietary factors can be considered as Viprakrista Nidan. Rest of the items with an incidence rate below 50% are to be considered insignificant and hence not recorded as predominant in the study.

Potato chips:

Potato chips has occupied the highest predominance with 60% prevalence. Potato chips are starch rich foods containing Sulfites. When these are fried at high temperature, a toxic chemical named Acrylamide is formed which is responsible for bronchial asthma in children⁵.

The Potato chips are considered under Ruksha ahar as mentioned in Charak Samhita. As the potato slices are fried in high temperatures, becomes light and dry and can be considered as Ruksha ahar. This Ruksha ahar intake causes vitiation of Vata dosha which brings Rukshata and Kathinyata in the pranavaha srotas⁷. As a result there will be marga avarodh of pranavaha srotas (constriction of bronchioles) due to which pratiloma gati of Vayu takes place causing Swasa Roga. So, excessive intake of Indian potato chips containing 28 gm/packet for five or more days in a week resulting in a total intake of ≥ 140 gm/week, may have a role in causing swasa roga in children (childhood asthma).

Chocolates:

In modern days, chocolates/candies are frequently taken and loved by children. Chocolates include variety of ingredients like milk, peanut, soy, corn, wheat and gluten. Among the ingredients, either one or more than one of them may be allergic to the children⁸.

In Ayurveda, guru ahar has been considered as one among the aetiological factor of swasa roga⁷. Chocolate is made of sugar + Cocoa powder + edible food colour. Presence of madhura rasa causes mandagni in children that forms Aam (mal digested food) which again increases kapha dosha in

the body⁷. The kapha dosha formed causes *marga avarodha* in the *pranavaha srotas* leading to *vata vridhhi* in *pranavaha srotas* and finally causes *vimarga gaman (pratiloma gati of Vayu)* leading to *swasa roga*. So, excessive intake of chocolates or candies with varying weights in Indian market ranging from 3.4 gms (1 Rs/tofees) to 13.2 gms (10 Rs/bars) for five or more days in a week resulting in approximate consumption of 17 gms to 66 gms/week while considering only one chocolate/day.

BISCUITS:

A protein named gluten found in Biscuits, can cause inflammation. When children eats gluten the immune system jumps into action, causing inflammation. This inflammation can affect the body's organs and soft tissue⁹. Biscuits are baked goods made with sulfites, and many also contain trans fats and saturated fats, which seem to worsen asthma symptoms. Sulphites and sulphiting agents, such as sodium and potassium sulphite, metabisulphite, bisulphites and sulphur dioxide (SO₂) are used in biscuits, bread, pie and pizza dough etc. predominantly as anti-browning agents, antioxidants and preservatives¹⁰. Exposure to sulphites has been reported to induce a range of adverse clinical effects in sensitive individuals, ranging from dermatitis, urticaria, flushing, abdominal pain and diarrhoea to life-threatening anaphylactic and asthmatic reactions¹¹.

As biscuits are mainly made up of wheat flour which can be considered as *pistanna* in Ayurveda. In Ayurveda, *pistanna* has been considered as one among the aetiological factor of *swasa roga*. *Piṣṭāṇna* refers to "grained food", as mentioned in a list of potential causes for indigestion in the 17th century *Bhojanakutūhala (dravyaguanāguṇa-kathana)*. *Pistanna* cause *Mamsa vaha srotodusti*¹². While enumerating the *nidan* of *Urustambha*, *Acharya Charak* explains that *Pistanna* leads to the formation of *Aam* (a product of altered digestion and metabolism) located in the gastro-intestinal tract, along with *meda* causes obstruction to *Vata* causing involuntary spasm and immobility¹³. So intake of *pistanna* (biscuits etc) can create *ama* formation and lead to *srota avarodh* in *pranavaha srota* causing *swasa* in children.

So, excessive intake of biscuits containing 80 – 100 gm/packet/day of Rs. 10 in Indian market for five or more days (5-8 biscuits/day) in a week resulting in a total intake of ≥ 250 gm/week, may have a role in causing *swasa roga* in children (childhood asthma).

CONCLUSION:

The present study indicates the possible role *aharaja nidanas* in the manifestation of the disease, childhood Asthma.

The *aharaja nidanas* relating to the disease in the study are found to be excessive intake of (more than five days in a week) ≥ 140 gm/week of potato chips and ≥ 66 gm/week of chocolates and ≥ 250 gm/week in children. So, these *hatus* can be considered as *viprakrista nidanas* of asthma in children.

Hence, the study indicates, for prevention of Asthma in children, a child should avoid the excessive intake and indulgence of the above aetiological factors. Similarly, for curative purpose of childhood asthma, the above aetiological factors can be taken into consideration from an Ayurvedic perspective.

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