



## Shatyadi Granules- Ayurvedic Anti Histamine – A Clinical Trial

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### Abstract:

**Background:** Bronchitis is nonspecific inflammation of the upper respiratory tract caused due to allergic and non-allergic factors. On exposure to allergens, the tracheobronchial epithelium may become significantly hypersensitized leading to a protracted cough lasting 1-3 week. It first presents with nonspecific upper respiratory infectious symptoms, such as rhinitis. 3-4 days later, a frequent dry hacking cough develops, chest pain may be prominent complaints in older children. Children are the wealth of tomorrow and a healthy child can lead the nation in future keep these facts in mind this study has been planned to provide better and safer life to the children suffering from *vataja kasa* in our society and for same purpose clinical study on Ayurvedic formulation *shatyadi* granules one of the most potential preparation explained in Ayurveda Samhita.

**Materials and methods:** Shatyadi granules were prepared in Parul Ayurved pharmacy Vadodara, Gujarat, India and was used in patient having allergic bronchitis. 20 patients aged between were enrolled from all different hospitals of Vadodara city. Special case record proforma and google forms were used for collection of data.

**Results:** significant antihistamine activity of *Shati Vati* was noted in 80% of the individual average dose 10gm in TDS. Statistically significant results were observed in reduction of allergic bronchitis.

**Discussion and conclusion:** *Shati Vati* is the combination having the drugs with antihistamine effect and can be used in day to day clinical *ayurveda* practices.

**Keywords:** allergic bronchitis, anti-histamine, *Ayurveda*, *Vataja Kasa*

### INTRODUCTION:

Bronchitis is an inflammation of the large airways of the lung. About 5% of adults have an episode of acute bronchitis in each year [1,2]. Acute bronchitis is the result of acute inflammation of the bronchi secondary to various triggers, most commonly viral infection, allergens and pollutants. *Vataja Kasa* (Allergic bronchitis) can be compared with dry cough in modern system of medicine. In Ayurveda, there are many compound drugs explained to treat *Vataja Kasa*. Contents of *shati vati* can be very effective for the management of *Kasa* as compared to the contemporary medicines[3]. So, here is a sincere effort to find out the alternative and cost effective treatment for *Vataja Kasa* with the help of *Shatyadi* Granules. So, Ayurveda herbal combination *Shatyadi* Granules has been prepared for anti-histaminic activity. *Shatyadi* Granules was having significant effectiveness in *Vataja Kasa* (Allergic Bronchitis).

**AIM:** To evaluate the Anti-Histamine effect of the *Shatyadi* Granules as symptomatic treatment.

### MATERIALS AND METHODS:

Raw material used for *Shati Vati* was procured from the local market of the Vadodara city Gujarat, India and authenticated by Pharmacognosy Department of Parul Ayurved institute. *Shati Vati* was prepared in GMP certified Parul Ayurveda Pharmacy of Parul University, Vadodara, Gujarat, India with following the SOP for *Shatyadi* granules formation.

**Table No. 1 :Ingredients of *Shatyadi* granules[4]. :**

Sr No.	Ingredient	Quantity
1.	<i>Shati</i>	1 kg
2.	<i>Badara</i>	1.5 kg
3.	<i>Sharkara</i>	2 kg
4.	<i>Go-Ghrita</i>	400 gm
5.	Loss	400gm
6.	Obtained	4.5 kg

**Method of preparation:**

- All the raw material used for Shatyadi granules were collected and physical impurities were removed.
- Fine powder of all ingredients were prepared.
- Go-Ghrita was taken into S.S.Vessel and heated on low flame.
- For the preparation of granules, above mentioned quantity of Sharkara was dissolved in 4 litre water.
- The water and Sharkara was heated upto 90-95° C until complete dissolution of sugar.
- After that fine powder of all the ingredients were added into this and mild heat was given
- Thorough stirring was done to get a homogenous blend.
- The blended mass was passed through #10 sieve to obtain granules and kept for drying at room temperature. The dried granules were packed in airtight container.

**OBSERVATION AND RESULTS:**

Total 20 patients with age criteria of 15-30 year age was taken for study

**Table No. 1 : distribution of patient according to age :**

Age group	No. of Patients	Percentage
15-20	9	45
20-25	5	25
25-30	6	30

Lowest age limit was chosen at 15years and upper range of age was chosen at 30years. Majority of patients are belonging to 15-25 age.

**Table No.2: Distribution of patient according to symptoms**

Sr.No.	Name of symptoms	Percentage
1	Sneezing	40
2	Acute Dry cough	36
3	Itchy throat	13
4	Running nose	9
5	Other symptoms	2

Cardinal symptoms of acute bronchitis is acute cough was present in 36 % of patients. patient sneezing in 40%, itchy throat in 13%, running nose in 9%, rashes and body ache in 2% patients were observed.

**Table No.3: Distribution of patient according to Gender:**

Gender	Number of patients	Percentage
Male	13	65
Female	7	35

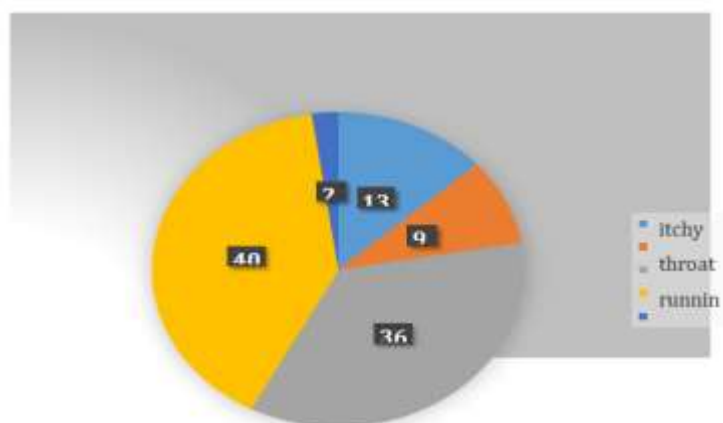
Among the all 20 patients, 65 % of patients were male and remaining 35 % were female patients.

**Table No.4: Dose frequency of drug to patients:**

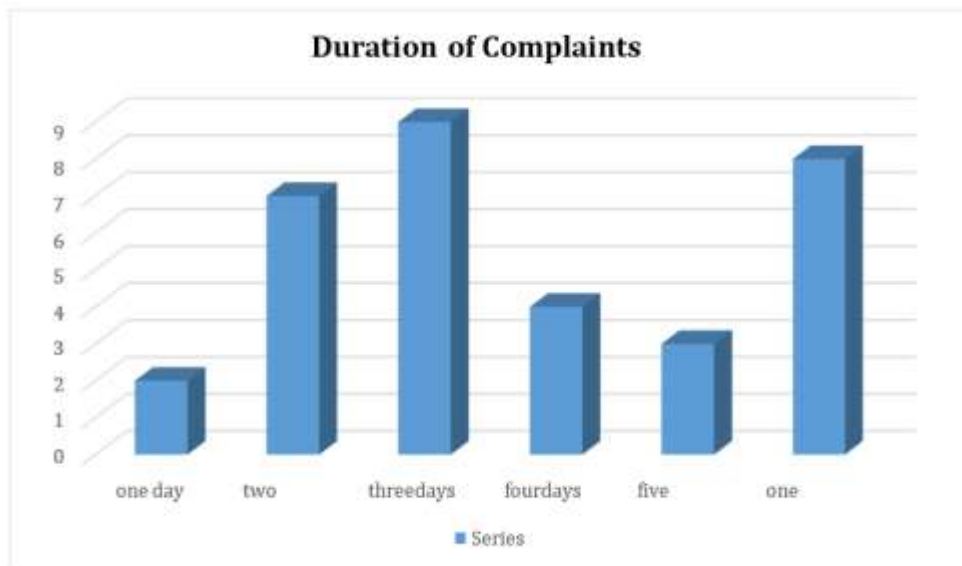
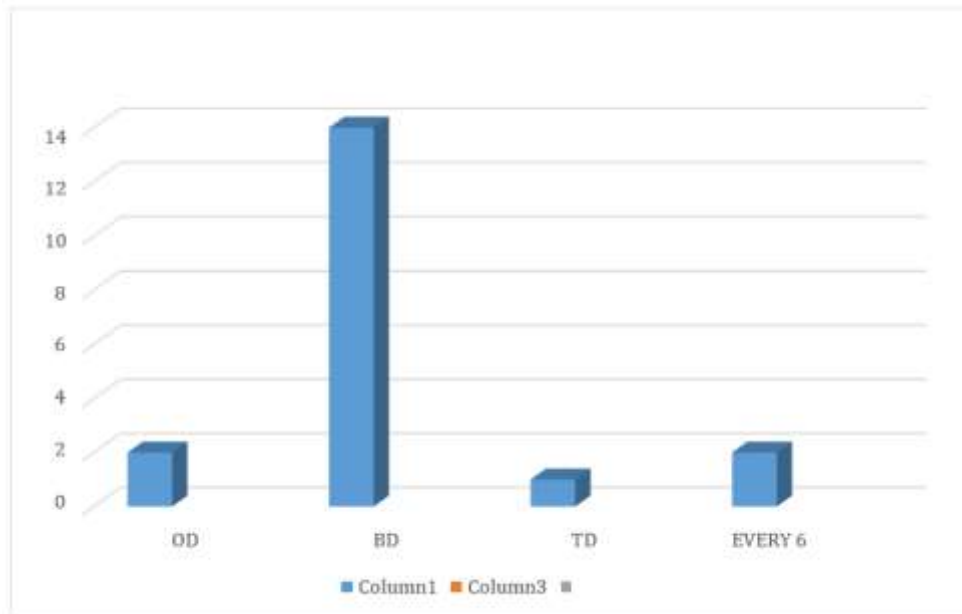
Sr. No	Time for drug administration	Percentage
1	Once in a day	10
2	Twice in a day	70
3	Thrice in a day	10
4	On every 6 <sup>th</sup> day	10

70 % patients were given drug in twice a day for oral administration,, while remaining 10%, 10% and 10% were given in once a day, thrice a day and every 6<sup>th</sup> day respectively.

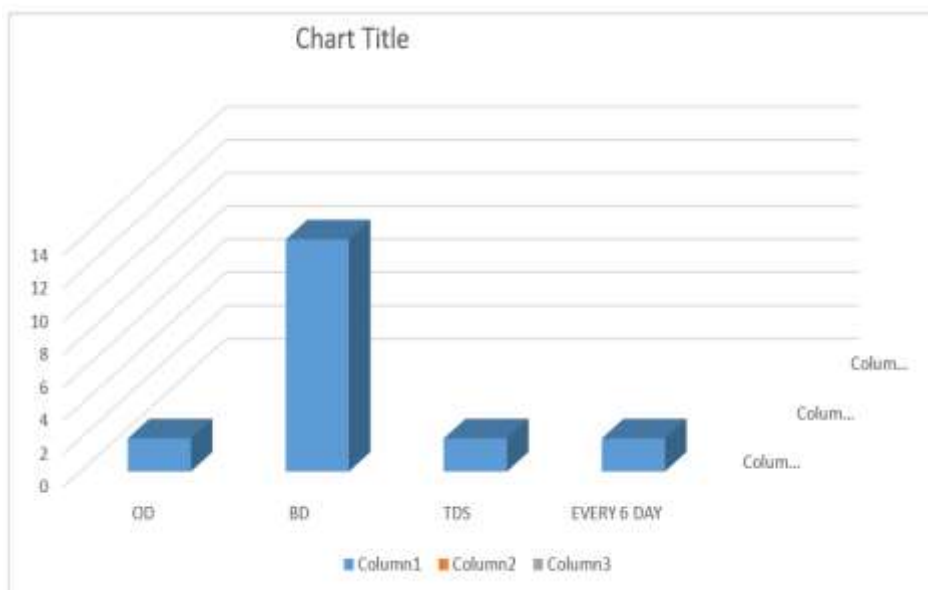
Majority of patients were suffering from one week with symptoms of bronchitis.



**Graph No.1: symptoms of allergic bronchitis in 20 patients**

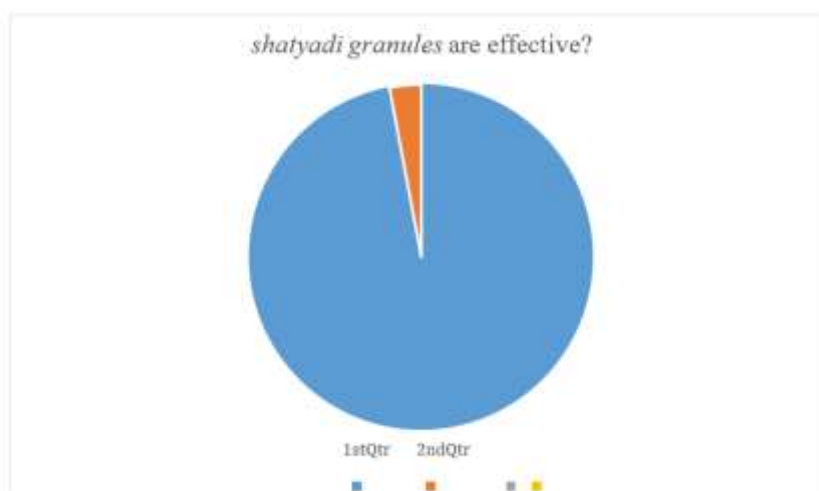


Graph No.2: duration of complaints



Graph No.3 dose frequency of administration of shatyadi granules to 20 patients

Maximum patient were observed *Shatyadi* granules twice a day. It means 5gm twice a day is the optimum dose for antihistamine effect of *Shatyadi* granules.



Graph No.4 *Shatyadi* Granules are effective?

In 97% of patients *Shatyadi* granules are effective. 3% of patient *shatyadi* granules.

**DISCUSSION:**

On the basis of relief in the symptoms to the patients, the overall effect of the drug on acute bronchitis was assessed. It was observed that 97 % patients got marked positive response with the treatment, whereas 3% got moderate (50–75%) positive response.

This overall effect of the therapy shows that *Shatyadi* Granules is very effective in the management of acute bronchitis showing better improvements.

**Probable mode of action of Shatyadi Granules:**

It is a polyherbal Ayurvedic formulation having major ingredients – **Shati (CurcumaZedoria)**, **Badara (Terminalia chebula** Retz.).Shati is having anti-inflammatory, hypoglycemic, vasodilator, spasmolytic, antiasthmatic and hypotensive properties.it is having *Katu, Tikta, Kashaya Rasa* and having *Vatakaphashamaka* property (10).

Pranavaha Srotasa is **Vata-Kapha-Sthana**. Its function is mainly affected by vitiation of **Kapha** and **Vata**. Both the *Dravya* are having *Vata-Kaphahara* property. *Shatyadi* Granules helps in relieving the symptoms. Granules are having *Vatakaphara* property, so that may be effective in all the respiratory diseases as mentioned in its **Phalashruti**. 1,8-Cineole finds itself serving multiple therapeutic purposes such as analgesic, anti-inflammatory, antibacterial, airborne antimicrobial, antioxidant, antiviral, mucolytic, hypotensive, antispasmodic and it also increases the cerebral blood flow[15,16]

1,8-cineole is a isolated compound, 1,8-cineole is known for its mucolytic and spasmolytic action on the respiratory tract, 1,8-cineole controls inflammatory processes and mediator production of infection- or inflammation-induced mucus hyper secretion by its action as anti-inflammatory modifier rather than a simple mucolytic agent.[17]

Betulinic acid showed anti-inflammatory effects via inhibition of the nuclear factor-κB (NF-κB) pathway, providing important information on their anti-inflammatory mechanism. Furthermore, they markedly inhibited nitric oxide (NO) and prostaglandin E<sub>2</sub> (PGE<sub>2</sub>) production in lipopolysaccharide (LPS)-activated RAW 264.7 macrophages, and suppressed tumor necrosis factor-α (TNF-α), interleukin-6 (IL-6), and interleukin-1β (IL-1β) levels. Furthermore, they decreased protein expression of inducible nitric oxide synthase and cyclooxygenase-2.

Table No. 5: drug , its chemical constitution and action

Name of Drug	Chemical constitute	Action
<i>Shati</i>	1,8-cineole (eucalyptol)	1,8-cineole controls inflammatory processes and mediator production of infection- or inflammation- induced mucus hyper secretion by its action as anti- inflammatory modifier rather than a simple mucolytic agent
<i>Badara</i>	Betulinic acid	BA showed anti-inflammatory effects via inhibition of the nuclear factor-κB (NF-κB) pathway, providing important information on their anti- inflammatory mechanism. Furthermore, they markedly inhibited nitric oxide (NO) and prostaglandin E <sub>2</sub> (PGE <sub>2</sub> ) production in lipopolysaccharide (LPS)-activated RAW 264.7

**CONCLUSION:**

*Shatyadi* Granules is significant effective in Vataja Kasa (acute bronchitis) and it is having anti- histaminic activity.

**REFERENCES:**

1. Ghai O.P. (1996) – Textbook of essential paediatrics: Respiratory System, Interprint Publication, New Delhi, 4th Edition, Page no-273.
2. Kliegman Retal (2004) – Nelson’s textbook of pediatrics: Respiratory pathophysiology and regulation, Reed elsevier India Private Ltd., New Delhi, 17th edition 2004.
3. Chapter no- 52/8, Sushrut Samhita, Uttartantra, Kasapratishediya edited by Dr. Ambikadutt Shastri, Reprinted in 2015, Chaukhambha Sanskrit Sansthan, Varanasi.
4. Tripathi B, Astanga hrdayam of srimadvagbhata. Delhi: Chaukhamba Sanskrit Pratishthan; 2015
5. Anshul baloda :Journal of Pharmaceutical Research International 33(39B): 150-157, 2021; Article no.JPRI.71856 ISSN: 2456-9119 (Past name: British Journal of Pharmaceutical Research, Past ISSN: 2231-2919, NLM ID: 101631759)
6. Anti-Inflammatory Effects and Mechanisms of Action of Coussaric and Betulinic Acids Isolated from *Diospyros kaki* in Lipopolysaccharide-Stimulated RAW 264.7 Macrophages pubmed.gov
7. Kyoung-Su Kim 1, Dong-Sung Lee 2, Dong-Cheol Kim 3, Chi-Su Yoon 4, Wonmin Ko 5, Hyuncheol Oh 6, Youn-Chul Kim 7
8. Anti-inflammatory properties of the monoterpene 1.8-cineole: current evidence for co-medication in inflammatory airway diseases
9. Nelson textbook of Pediatrics, Robert Klieman, Edition 18, volume 2 chapter 388/1777.
10. Major K Nagarjun, Manual of paediatric allergy, Jaypee publication: H1 antihistamines in pediatric practice page no 117.
11. <https://ayurvedicoils.com/tag/health-benefits-of-1-8-cineole>
12. 8-Cineol Reduces Mucus-Production in a Novel Human Ex Vivo Model of Late Rhinosinusitis.
13. Sudhoff H1, Klenke C1,
14. Greiner JF2, Müller J3,
15. Thai P, Loukoianov A, Wachi S, Wu R. Regulation of airway mucin gene expression. *Annu Rev Physiol.* 2008;70:405–29. [Europe PMC free article] [Abstract] [Google Scholar]
16. Dohrman A, Miyata S, Gallup M, Li JD, Chapelin C, Coste A, et al. Mucin gene (MUC 2 and MUC 5AC) upregulation by Gram-positive and Gram-negative bacteria. *Biochim Biophys Acta.* [Research Support, U.S. Gov't, P.H.S.]. 1998. April 28;1406(3):251–9. [Abstract] [Google Scholar]
17. Levine SJ, Larivee P, Logun C, Angus CW, Ognibene FP, Shelhamer JH. Tumor necrosis factor-alpha induces mucin hypersecretion and MUC-2 gene expression by human airway epithelial cells. *Am J Respir Cell Mol Biol.* 1995. February;12(2):196–204. [Abstract] [Google Scholar]