



Research Article

**A COMPARATIVE STUDY OF *BILWADI* AND *BALCHATURBHADRA AVALEHA* IN
THE MANAGEMENT OF *BALATISARA***

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ABSTRACT:

Childhood is a very tender but superb stage of human life. The effect on physical development and mental status of this has its effect over rest of life period. The common symptoms of gastrointestinal tract disorder include abdominal pain, bowel disturbances (like diarrhea, constipation), nausea, vomiting, abdominal distention, anorexia, chronic Flatulence and failure to thrive due to disturbed digestion (i.e. functional derangement of GIT) The study is conducted in two Groups, in one Group; *Bilwadi Avaleha* is administered, while in other Group, *Balchaturbhadra Avaleha* is administered. 30 Patients in Group I and 30 Patients in Group II have completed the Course, out of 66 total registered cases. In Group I, the total effect of the therapy on the disease 'Balatisara' observed as 82.66% which is representing, improvement. While total effect of the therapy on the disease 'Balatisara' in Group II was observed as 71.33% which is representing, markedly improvement.

KEY WORDS: *Balaatisara, Bilwa, Balchaturbhadra, Diarrhoea, Improvement.*

INTRODUCTION:

AIMS & OBJECTIVES

Aims:

1. To compare the efficacy of *Bilwadi Avaleha* with *Balchaturbhadra Avaleha* in *Balatisara*.

Objectives:

1. To study the etiology of Diarrhea or *Balatisara* in children.
2. To study the effect of *Bilwadi Avaleha* in *Balatisara*.
3. To study the effect of *Balchaturbhadra* in *Balatisara*.
4. To compare the effect of *Bilwadi Avaleha* and *Balchaturbhadra Avaleha* in the management of *Balatisara*.

MATERIAL & METHODS

Materials:

- 1) *Bilwadi avaleha*.
- 2) *Balchaturbhadra avaleha*.
- 3) 30 patients in each group 60 patients likewise two groups A & B.

1) *Bilwadi Avaleha*:

The ingredients of B.A. are *Bilwa, Dhataki, Ushira, Lodhra, Gajapippali*.

For the purpose of study B.A. was prepared in *rasashatra bhaishjya kalpana* department, taking the raw drug which was authenticated and standardize in S. G. Phyto Pharma.

बिल्वं च पुष्पाणि च धातकीनां जलं सलोद्धं गजपिप्पली च ।

क्वाथावलेहौ मधुना विमिश्रौ बालेषु योज्जावतिसारिषु ॥

यो. र. बालरोग चि. ३.

2) *Balchaturbhadra Avaleha*:

The ingredients of B.C.A. are *Ativisha, pippali, Musta, Karkatashringhi*. For the purpose of study the B.C.A. is prepared in *rasashatra bhaishjya kalpana* department, taking the raw drug which was authenticated and standardize in S. G. Phyto Pharma.

घनकृष्णारुणाशुङ्गी चूर्णं क्षौद्रेण संयुतम् ।

शिशोर्ज्वरतिसारघ्नं श्वासकासवमीहरम् ॥

भै. र. बा. रो. चि. ७१/३९.

3) Patients:

The present study is conducted on 60 patients attending the OPD & IPD of the Kaumarabhritya department of our college. The study is conducted by

dividing the patients into two groups of 30 patients in each; one group is treated with B.A. and another with B.C.A.

Criteria for the selection of patient:

a) Inclusion Criteria :

1. Patient of either sex between the age group 3 yrs. to 16 yrs.
2. Patient with complain of loose motion with No and Some dehydration were selected for the present study.
3. Non infective diarrhea as per pathological investigation.

b) Exclusion Criteria :

1. Patient suffering from *atisara* as well as vomiting with some to severe dehydration.
2. Children suffering from "*pravahika & visuchika*".
3. Patient suffering from *atisara* as a *upadrava* in other disease.
4. Patient suffering from loose motion with blood.
5. Etiology of *atisara* due to laboratory investigation showing the pathogens, parasites.
6. Children suffering from any chronic diarrhea, associated with congenital anomalies, chronic systemic infection were excluded.
7. Chronic infection like AIDS, TB etc.

Methods :

i) Raw Material Standardisation:-

The raw material were selected and bought from S.G. Phyto Pharma and were then standardized.

a.) *Bilwadi Avaleha & Balchaturbhadra Avaleha* -

Standardized and good quality of *Bilwadi Avaleha & Balchaturbhadra Avaleha* prepared in *Ras-Shastra Bhaishajya Kalpana* Dept. of College was taken.

Method followed for the preparation of medicines :

1) *Bilwadi Avaleha*:

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Equipments:

Vessels, Spatula, Gas stove, Holding forceps,

Contents:

- a. *Bilwa* 1 Part
- b. *Dhatak* 1 Part
- c. *Lodhra* 1 Part
- d. *Ushir* 1 Part
- e. *Gajapippali* 1 Part

Procedure:

Avaleha nirman Vidhi.

DOSE & DURATION:

Bilwadi Avaleha (Group A)

Dose - 9 to 27 gm/Day. (according to Youngs formula)

Time - t.d.s.

Route of administration - oral

Duration - 07 days

Diet - *laghu aahar*.

Balchaturbhadra Avaleha :-

Reference:

भै. र. बा. रो. चि. ७१/३९.

Equipments:

Vessels, Spatula, Gas stove, Holding forceps,

Contents:

- a. *pippali* 1 Part
- b. *Ativisha* 1 Part
- c. *Karkatshringi* 1 Part
- d. *Musta* 1 Part

Procedure:

Avaleha nirman Vidhi:

- 1.A raw material as mentioned in Ayurvedic Pharmacopeia was taken.
- 2.Take *pippali*, *Ativisha*, *Karkatashringi* powder which is a *kwatha Dravya*.
- 3.Add a 16 times water to *kwatha dravya*, heat, reduce to one fourth and filtered through muslin powder.
- 4.Add sugar to the *kwatha*, boil to dissolve and filter through muslin cloth.
- 5.Reduced the *kwatha* to thicker consistency by gentle boiling and stirring continuously during the process.
- 6.Continuous heating till the preparation attains the consistency of *leha* confirmed by the formation of a soft ball that doesn't disperse in water.
- 7.Remove from heat source and allowed to cooling.
- 8.Fine powder of *Musta* were added and mix thoroughly to prepare a homogeneous mass.
- 9.Packed it in tight closed containers to protect from light and moisture.

Dosage:

Balchaturbhadra Avaleha (Group B)

Dose - 9 to 27 gm/Day. (according to Youngs formula)

Time - t.d.s.

Route of administration - oral

Duration - 07 days

Diet - *laghu aahar*.

OBSERVATIONS:**In relation to age:**

50% of the patients were from 03 - 06 years of age. Followed by 43.33% of the patients were from the age group 07 - 10 years. 6.66% of the patients were from 11 - 16 year. It can be said on this observation that, according to Indian social and cultural system up to 3 years of age, child is totally dependent on the parents. But after this age, child starts to demand for the specific foods and by doing it child is exposing to various food items from outside too.

In relation to sex:

Incidence was found higher in males 53.3% as compared to females 46.6%. Nothing specific conclusion can be drawn from this observation, but in some families more importance is given to male children and they are given whatever they demand.

In relation to Weight:

Incidence was found maximum i.e. 36.6% of the patients was having wt. 15- Kg., 33.3% of the patient having wt. less than 15 Kg. Nothing specific conclusion can be drawn from these observations.

In relation to religion:

It is seen from this observation that majority of the patients were Hindu 95% and remaining 05% were Muslims. This may be because of Hindu dominated population of kodoli.

In relation to education:

66.6% patients were from primary school followed by 33.3% from preschool. School going children are more subjected to improper food and food habits and are also prone for the drinking contaminated water, so they are more susceptible to *Atisara*. **In relation to socio economic status:**

35% patients belongs to middle class, followed by 65% belonged to lower class. Socio-economic status has direct effect on child's response to illness. If they are poor and the diet is inadequate, child's resistance to disease will be poor. Similarly socio-economic status also plays major role in meeting the health care expenditure of child including immunization and maintaining residential hygienic conditions. On the other hand, people of lower economical condition, have the habit of eating road side oily, fried, spicy food and drinking unclean water in these shops, which might have resulted in *Agni Dushti*, ultimately resulting in *Atisara*.

In relation to desha:

It is seen from this observation that majority of the patients were from *sadharan desha*.

In relation to immunization:

Artificial immunization is unavoidable in today's society due to the environmental pollution and the

child's exposure to various kinds of infectious agents in schools and outside. 95% of patients were properly immunized. While 05% of patients were improperly immunized. Nothing specific conclusion can be drawn from these observations.

In relation to sibling (family history):

50% of patients having one sibling, 11.6% of patients were having two siblings. It can be said in this regard that, it shows unawareness towards the importance of food, like which food should be eaten, when it should be eaten and how it should be eaten etc.

In relation to past history:

48.33% of patients were having past history of *Krimi*, followed by 38.3% of patient were having past history of *Grahani*. It can be said in this regards that after GIT disorder if patient cannot take the wholesome diet, it may be the chances of *Agni Dushti*.

In relation of treatment history: 15% of patients were taken allopathic treatment while 85% patients were not taken treatment. Nothing specific conclusion can be drawn from these observations.

In relation to birth history:

71.66% of patients were born by full term normal delivery, 15% of patients were born by full term L.S.C.S. Nothing significant conclusion can be drawn in connection with disease.

In relation to nature of food:

90% of patients were observed as mix diet while, 10% of patients were having vegetarian diet. It can be concluding regarding Kodoli is Mix diet prone area.

In relation to quality of food:

% of patients had to take food in poor quality, 28.85% of patients had taking food in moderate quality, it can be conclude in this regards that poor quality of food may aggravate the *Vata Dosha* and ultimately leads to *Agni Dushti*. **Dominant Rasa:**

50% of patients were having *Katu Rasa* dominance in their diet, 23.07% patients were having *Madhura Rasa* dominance diet, 15.38% of patients were having *Amla Rasa* dominant diet, Intake of *Katu* and *Amla Rasa* causes vitiation of *Pitta* which may lead to the disease. Excessive intake of *Madhura Rasa* causes *Agnimandya*, leads to *Amotpatti*, leads to *Srotorodha*, which may ultimately leads to the disease.

EFFECT OF THERAPY:

In Group A, *Dravamala vega* was relieved by 92.28%, while in Group B it was relieved by 88.38%. Both results were statistically highly significant. It is clear from the above description that both drugs has reduced the frequency of *dravamala vegas*. This symptom is produced due to *Aapa dhatu Dusti* mainly due to vitiation of *Vata* and *Kapha Dosha*, and most of

the drugs in the both formulations have *Kapha pitta Shamaka* properties. Therefore, this may one be the reason that the better relief has been found.

In Group A, Thirst was relieved by 90.90%, while in Group B it was relieved by 66.66%. Both results were statistically significant. It is clear from the above description that both drugs have reduced the frequency of Thirst. This symptom is produced due to *Aapa dhatu Dusti* mainly vitiation of *Vata* and *Kapha Dosh*, and most of the drugs of both compound has *Sheeta virya* and *Kapha pitta Shamaka* properties. Therefore, this may one be the reason that the better relief has been found

In Group A, Restoration of *Agni* was relieved by 67.76%, while in Group B it was relieved by 51.98%. Both results were statistically highly significant. It cleared from the above description that both drugs have reduced the frequency of Restoration of *Agni*. This symptom is produced due to *Aapa dhatu Dusti* mainly due to vitiation of *Vata* and *Kapha Dosh*, and most of the drugs has *Laghu, rukaha gunatmaka* properties. Therefore, this may one of the reasons that the better relief has been found

In Group A, *Mutra pravrutti* was relieved by 80.58%, while in Group B it was relieved by 54.54%. Both results were statistically highly significant. It is clear from the above description that both drugs have reduced the *Mutra pravrutti*. This symptom is produced due to *Aapa dhatu Dusti* mainly vitiation of *Vata* and *Kapha Dosh*, and most of the drugs of both compound has *Mutral* property. Therefore, this may one be the reason that the better relief has been found.

In Group A, Dehydration was relieved by 78.78%, while in Group B it was relieved by 76.66%. Both results were statistically significant. These are clear from the above description that both drugs has reduced the Dehydration.

OVER ALL EFFECT OF THERAPY:

In Group A (*Bilwadi Avaleha*), 19 patients were Cured, 1 patient was Markley cured. 10 patients were Moderately cured, and no one patient was observed as unchanged. In Group B (*Balchaturbhadra Avaleha*), 15 patient were cured, 14 patients were markley cured, and 1 patient was moderately cured, while in one patient unchanged was observed.

In the concluding remarks the results clearly shows that *Bilwadi Avaleha* along with parent counseling was highly effective in managing the disease as compared to the *Balchaturbhadra Avaleha*. **Comparative effect of test drug (by unpaired 't' test):**

Apparent difference of improvement in *Dravamala vega* and Restoration of *agni* was observed in Group A and Group B by unpaired 't' tests. Also thirst, *mutra pravrutti* and dehydration were observed by Wilcoxon sign rank test. So, from the obtained data, it may be inferred that the treatment schedule of Group A and Group B are same effective in *Dravamala vega*, thirst, and dehydration. In the symptom *mutra pravrutti* Group A is better than Group B i.e. significant difference and in the symptom Restoration of *agni* Group B is best than Group A i.e. Highly significant difference.

CONCLUSION:

According to Age, maximum i.e. 50% of Patients were observed from the Age group 03-06 years. According to Sex, maximum i.e. 53.3% of Patients were male. According to the Religion, maximum i.e. 95% of Patients were Hindu. According to the Education, maximum i.e. 66.6% of Children were from Primary school category. Socioeconomical status wise, maximum i.e. 100% of Patients were from middle class. Desha wise, 100% of Patients were from Sadharan desha. Immunization history wise, 95% of Children were properly immunized. Birth history wise, maximum i.e. 71.6% of Children had Full Term Normal Delivery. Developmental history wise, 100% Children had Proper Gross Motor, Fine Motor, Social, Mental and Language development according to Age. Nature of food wise, maximum i.e. 90% of Children were Mix food. General examination wise, in all the Cases, Temperature Was within Normal Limits, Pulse was Rhythmic was regular. *Prakriti* wise, in maximum number of Children i.e. 61.90% were of *Vata Pitta Prakriti*. According to Chief complaints, *malavega* was observed in 100%. Thirst was observed in 31.6%. Restoration of *Agni* was observed in 100% *Mutra pravrutti* was observed in 96.6%. Dehydration was observed in 31.6%.

EFFECT OF THERAPY:

Evaluation of the disease was carried out under the symptoms, *Malavega*, Thirst, Restoration of *agni*, *Mutra pravrutti* and dehydration. The effect of therapy on these symptoms in both the Groups comparatively has shown, at the end of treatment, *Malavega* was relieved by 60% in Group -I and by 80% in Group - II. Thirst was relieved by 96.66% in Group I and by 90% in Group II. Restoration of *agni* was relieved by 83.33% in Group I and by 66.66% in Group II. *Mutra pravrutti* was relieved by 80% in Group I and by 50% in Group II. Dehydration was relieved by 93.33% in Group I and by 70% in Group II.

TOTAL EFFECT OF THERAPY:

In Group I, the total effect of the therapy on the disease 'Balatisara' observed as 82.66% which is representing improvement. While total effect of the therapy on the disease 'Balatisara' in Group II was observed as 71.33% which is representing markedely improve.

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