INFANTILE DIARRHOEA – AN AYURVEDIC APPROACH

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ABSTRACT: In this sample study the authors report the efficacy of an Ayurvedic compound drug administered in Children under 2 years age suffering from non specific infantile diarrhoea.

INTRODUCTION

Infantile mortality rate amounts very high in tropical countries like India due to infantile diarrhoea. Inspite of enormous expenditure incurred to improve health standards of the masses, diarrhoea still poses the same threat especially in rural areas. Although it is not a deadly disease as such yet due to ignorance, lack of medical facilities and late treatment children suffer heavily and by the time they reach some proper medical institution the cases turn complicated to the extent of irreversible state.

To combat such situations propagation of such treatment is earnestly needed which should be easily available, cheap, safe and effective. Ayurveda stands ready for the help of the masses.

MATERIAL AND METHOD

86 children upto the age of 2 years with complaint of diarrhoea form the sample of the study. All the children were from the rural settings of Kasi Vidpapitha Block, Varanasi. The cases having the history of fever, respiratory, infection, otitis media (dehydration, vomiting, blood in stool) and worm infestation were not included in this study.

The parents were instructed to administer Haritaki Satapuspa decoction prepared as follow in group A.

Haritaki small (Terminalia chebula) – 45 gms.
Satapuspa (Foeniculum vulgare) – 45 gms.

First of all Haritaki was anointed with pure ghee and then parched at low temperature. Half portion of Satapuspa was parched and rest half was kept as such. Now both the drugs were powdered (crude) and divided into 9 parts (10 gms, each packet). Decoction (traditional method of 1:6) was prepared from one part of the powder and administered in the doses of 1 TSF / 2 TSF at 15 minutes interval as per age (below one year 1 TSF and 2 TSF above one year). Thus consuming the whole liquid within 2 hours / 1 hour respectively.

Group B children received Pectoakolin suspension 1 TSF thrice daily below 1 year and 1 ½ TSF above 1 year.
Pre-assessment as per age, sex, socio economic status, level of personal hygiene, type of milk for feed, colour of stool and duration of symptom was made. Criteria for cure was based on reduction of frequency of stool per day upto two, normal colour and consistency of the stool.

**OBSERVATIONS**

**Sex distribution:**

Out of 46 children from group A, 30 were males and remaining being females where as 18 females were in group B as shown below:

**TABLE – I**

| Sex       | Group A | Group B |
|-----------|---------|---------|
| No. | %      | No | %|
| Male | 30 | 65.22 | 22 | 55.00 |
| Female | 16 | 34.78 | 18 | 45.00 |

**Age distribution:**

Maximum number of cases were within the age range of 6 months to 18 months in both the groups. Lowest age in group A and B was 4 months and 5 months respectively. Details of the age are as under:

**TABLE – II**

| Age in months | Group A | Group B |
|---------------|---------|---------|
| No. | %      | No | %|
| 0 – 6 | 08 | 17.39 | 07 | 17.50 |
| 6 – 12 | 14 | 30.44 | 11 | 27.50 |
| 12 – 18 | 15 | 32.61 | 17 | 42.50 |
| 18 – 24 | 09 | 19.56 | 05 | 12.50 |

**Socio – Economic Status:**

38 children in group A belonged to low socio – economic status and 34 in group B were from the same as shown in Table – 3.
TABLE – III

| Socio economic status | Group A |       | Group B |       |
|-----------------------|---------|-------|---------|-------|
|                       | No.     | %     | No.     | %     |
| Low                   | 38      | 82.60 | 34      | 85.00 |
| Middle                | 06      | 13.05 | 05      | 12.50 |
| High                  | 02      | 04.35 | 01      | 02.40 |

Level of Personal Hygiene:

Poor level of personal hygiene was noticed in both the groups. It was found good only in two children among children of group A as shown below:

TABLE – IV

| Personal Hygiene | Group A |       | Group B |       |
|------------------|---------|-------|---------|-------|
|                  | No.     | %     | No.     | %     |
| Poor             | 36      | 78.26 | 29      | 72.50 |
| Moderate         | 08      | 17.39 | 10      | 25.00 |
| Good             | 02      | 04.35 | 01      | 02.50 |

Type of Milk for Feeding:

Maximum children in both the groups were breast fed i.e 34 and 30 in groups A & B respectively. Children above six months in both the groups were being provided cereals also along with milk. Details of feeding are as under:

TABLE – V

| Type of feeding  | Group A |       | Group B |       |
|------------------|---------|-------|---------|-------|
|                  | No.     | %     | No.     | %     |
| Breast           | 34      | 73.92 | 30      | 75.00 |
| Cow’s milk       |         |       |         |       |
| - With spoon     | 08      | 17.39 | 04      | 10.00 |
| - With bottle    | 04      | 08.69 | 05      | 12.50 |
| Spray dried milk | 00      | 00.00 | 01      | 02.50 |
Duration of Diarrhoea:

Patients in both the groups were having history the diarrhea ranging within one to 4 days. Majority of cases were having diarrhea for the last 3 days as shown in Table – 6.

### TABLE – VI

| Duration | Group A | Group B |
|----------|---------|---------|
|          | No.     | %       | No.  | %   |
| 1 day    | 04      | 08.69   | 2    | 05.00 |
| 2 days   | 05      | 10.86   | 7    | 17.50 |
| 3 days   | 22      | 47.83   | 20   | 50.00 |
| 4 days   | 15      | 32.62   | 11   | 27.50 |

Colour of stool:

Yellow and yellow + white mixed colour of stool was reported in both the groups A & B as 69.56% and 77.50% respectively. Further details are as under:

### TABLE – VII

| Colour of stool | Group A | Group B |
|-----------------|---------|---------|
|                 | No.     | %       | No.  | %   |
| Yellow          | 20      | 43.48   | 16   | 40.00 |
| White           | 08      | 17.39   | 07   | 17.50 |
| Yellow + White  | 12      | 26.08   | 15   | 37.50 |
| Green           | 06      | 13.05   | 02   | 05.00 |

Frequency:

18 children in Group reported frequency of stool to be 7 to 9 within last 24 hours and 14 were having 10 – 12 stools per day. Details are shown in Table – 8.
**TABLE – VIII**

| Frequency | Group A | Group B |
|-----------|---------|---------|
|           | No.     | %       | No    | %      |
| 4 – 6     | 5       | 10.86   | 8     | 20.00  |
| 7 – 9     | 18      | 39.13   | 13    | 32.50  |
| 10 – 12   | 14      | 30.44   | 10    | 25.00  |
| 13 – 15   | 6       | 13.05   | 5     | 12.50  |
| 15 & above| 3       | 6.52    | 4     | 10.00  |

**Consistency:**

Maximum children in both the groups were having loose stools whereas history of semi-solid stools was in minimum patients as shown in Table – 9.

**TABLE – IX**

| Consistency | Group A | Group B |
|-------------|---------|---------|
|             | No.     | %       | No    | %      |
| Semisolid   | 3       | 6.52    | 5     | 12.50  |
| Loose       | 33      | 71.76   | 27    | 77.50  |
| Watery      | 10      | 21.72   | 8     | 20.00  |

**Duration of Treatment:**

6 children in group B got relief from diarrhoea within 2 days whereas in group A no patient was free from symptom although frequency was reduced to half within two days. Eight and six patients in groups A & B respectively, discontinued the treatment within 2 days of starting the treatment. Duration of cure has been shown in table – 10.
TABLE – X

| Duration in days | Group A | | Group B | | |
|------------------|---------|---|---------|---|
|                  | No. | %  | No. | %  |
| 2                | 0  | 0.00 | 06  | 15.00 |
| 3                | 24 | 52.17 | 15  | 37.50 |
| 4                | 14 | 30.44 | 13  | 32.50 |
| Discontinued     | 08 | 17.30 | 06  | 15.00 |

**DISCUSSIONS**

Diarrhoea is the commonest disease present in the infant age group in India. The majority of population being inhabited in rural areas, some easily available drugs can provide solution to the problem. Keeping in view this aspect Haritaki Puspadi compound was prescribed to the children between the age group of 1 – 24 months.

Poor level of personal hygiene seems to be the cause of diarrhoea in this age group as in 65 cases of both the groups. This level was found poor. Low socio economic status also contributes to infantile diarrhoea.

Very few mothers pay proper attention to their kids especially having loose motions. They become alert only when it has passed few days and conditions worsen by the time.

Although maximum number of children were breastfed and it is known as best for infants but least care towards personal hygiene contributes to precipitate the symptoms (Table – 5).

57.17% children were cured within 3 days of treatment in group A whereas 52.50% cases were cured in group B. On 4th day it was 30.44% and 32.50% respectively in group A & B. So the results in both the groups seem to almost similar.

Haritaki is reported to cause and loose motions but when roasted it is Tridosaghna and when treated with water it induces constipation by reducing paristalsis (Bhava Prakasa), probably this property of the drug might have affected cure in the children. Antitoxic property of Haritaki has also been reported in Ayurvedic text and it might also be helping in reducing various intestinal toxins. Thus ultimately reduces parastaltic movements. It may also reduce the frequency due to its astringent action.

Shatpurspha is the known Pacana drug and may influence the Agni and thus providing better absorption of the food material present in the intestines.

Combination of these two drugs result in reduction in frequency of motions and provide normal colour and consistency to the stool. The compound has upper hand over other antidiarrhoeals available in the market as it is available easily in any part of the country and economical also as per day.
cost of the treatment amounts to near about 30 paisa as compared to other antidiarrhoeals.

Various studies in rural as well as urban report that water intake per month during diarrhoea is usually stopped which further worsen the condition of child. The present formulations allows the better water intake, thus save the child from acute dehydration also.

It can be concluded that the combination prescribed to group A is very economical and effective and may prove wonder if propagated among the masses to reduce infant mortality rate due to diarrhoea. The combination can also help in the cases of specific diarrhoea in combination with other drugs as an adjuvant therapy.

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