



## COMPARITAVE STUDY OF SUVARNA PRASHAN WITH SUVARNA BHASMA AND SUVARNA SHALAKA IN CHILDREN.

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### ABSTRACT

Suvarna prashan has been traditionally practiced all over india since ancient times. It is said to boost immunity and improve mental well being of children but there is no sufficient data available to prove its efficacy and safety. This study was aimed at establishing safety and efficacy of swarna prashan with suvarna bhasma(fine powder of gold) and suvarna shalaka (gold stick) in chlidren and study its effects on children. In this study two groups of suvarna shalaka and suvarna bhasma were administered an d studied.

**KEYWORD:** Suvarna prashan administered an d studied.

### INTRODUCTION

In children growth and development proceed concurrently. Growth and development of brain is maximum in first year of life. Hence *Ayurveda* advocates *lehan* or feeding of certain substances to the newborn from the first day of life, for promoting intelligence, fortunes, merit, longetivity of life, Complexion and for preventing the child from attacks of evil demons probably by increasing the endurance and vitality.

In modern medicines immunity is developed by introducing vaccines in growing children. But this vaccination gives immunity against some specific antigens. They act against some said diseases only. Many diseases have no vaccines yet to prevent them. There is no remedy to improve mental health.

*Kashyapacharya* described *Suvarna Prashan* in the *lehan* chapter thousands of years ago. In which gold along with honey and *ghrita*(ghee) is given to the child. Feeding of gold increases intellect, strength, virtuous, complexion, metabolic and digestive power and eliminates the evil effects. By introducing *Suvarna prashan* for one month the child is said to become very intelligent and does not become a victim of diseases, and when continued for six months is said to become *Kstrutadhara* means is able to retain what so ever he hears.

### AIMS

- ❖ To study the efficacy of oral administration of *Suvarna prashan* in children upto 5 years of age.
- ❖ To compaire the effects of *suvarna bhasma* and *suvarna shalaka* in children upto 5 years of age.

### OBJECTIVES

- ❖ To develop evidence based support for the efficacy of *suvarna prashan* in mental and physical development of children upto age of 5 years.
- ❖ To generate data on safety of *Suvarna prashan*.
- ❖ To do standardization and quality control of *Suvarna prashan*.

### Inclusion criteria

- Age 0 – 5 years
- Both sex male and female.
- Term and post term baby born by normal vaginal delivery or by L.S.C.S without any complications.
- Babies birth weight  $\geq 2000$ gms

### Exclusion criteria

- Age > 5 years
- Preterm baby < 37 weeks of gestational age.
- Birth weight < 200gms
- Baby born with antenatal and natal complications.
- Baby needed extensive steps of resuscitation, (more than PPV.)
- Having postnatal complications
- Having congenital anamolies
- Having congenital metabolic abnormalities.
- Known cases of hypersensitivity.

### Plan of work

The study was done in two groups Group A and Group B.

### Group A (*Suvarna bhasma*)

Drug preparation : 100mg *Suvarna bhasma* mixed in 100ml *goghrita*.

Drug Dose : 0.2 ml above ghrita (0.2 mg gold) 0.3 ml honey

### Group B (*Suvarna shalaka*)

Babies in this group were given the drug in the following way.

Drug preparation and dose : Pure gold – 03 circles = 0.07325 w/w  
Goghrita – 0.2ml  
Honey 0.3ml

Rubbing three circles of *suvarna shalaka* (gold stick) on round stone with disteel water and collect it in spoon and add 0.3ml honey and 0.2ml ghee. As described in *kashyap samitha*.

### Time of administration

*Suvarna prashan* is done on every *pushya nakshatra* in the morning.

### Place of work

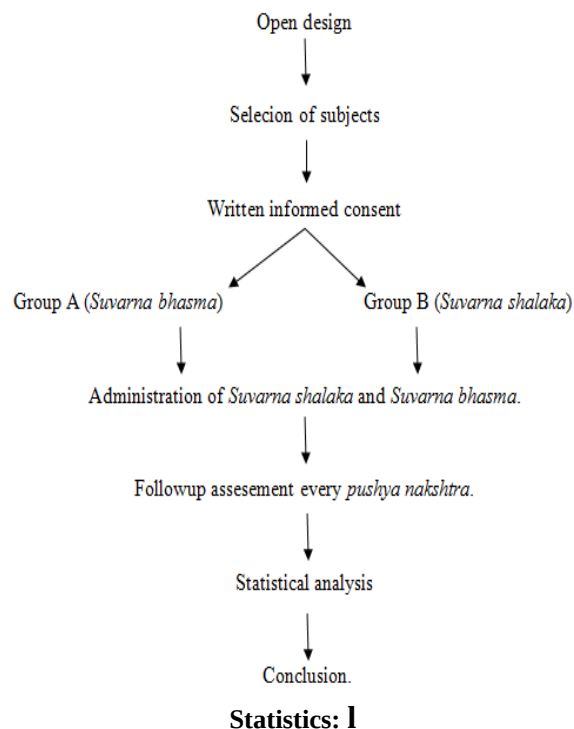
Balrog department. Seth tarachand ramnath hospital, Rastha peth, Pune -11.

### Assesment criteria

Antropomertic assesment. (growth chart given in textbook of pediatrics).

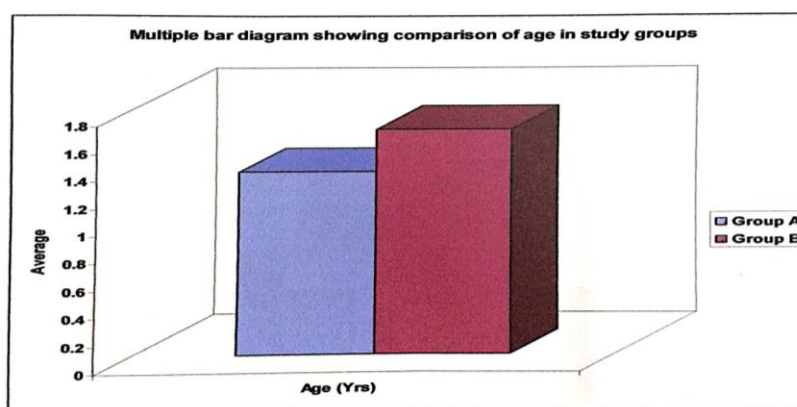
Milestones development. (MGRS group, WHO motor development study. Acta Pediatrics 2006) Health history.(as questionarre).

### Study design



**Table: 1 Comparison of age in study groups**

| Parameter | Group A              | Group B             | t value | P value |
|-----------|----------------------|---------------------|---------|---------|
|           | Mean $\pm$ SD (n=19) | Mean $\pm$ SD (n=8) |         |         |
| Age (yrs) | 1.34 $\pm$ 1.22      | 1.65 $\pm$ 1.43     | 0.55    | >0.05   |



**Figure 1**

**Table: 2 sex wise distribution of cases in study groups.**

| Sex    | Group A(%) | Group B(%) | Total (%)  |
|--------|------------|------------|------------|
| Male   | 10 (37.04) | 4 (14.81)  | 14 (51.85) |
| Female | 9 (33.33)  | 4 (14.82)  | 13 (48.15) |
| Total  | 19 (70.37) | 8 (29.63)  | 27 (100)   |

$\chi^2=0.09$ ,  $p > 0.05$ .

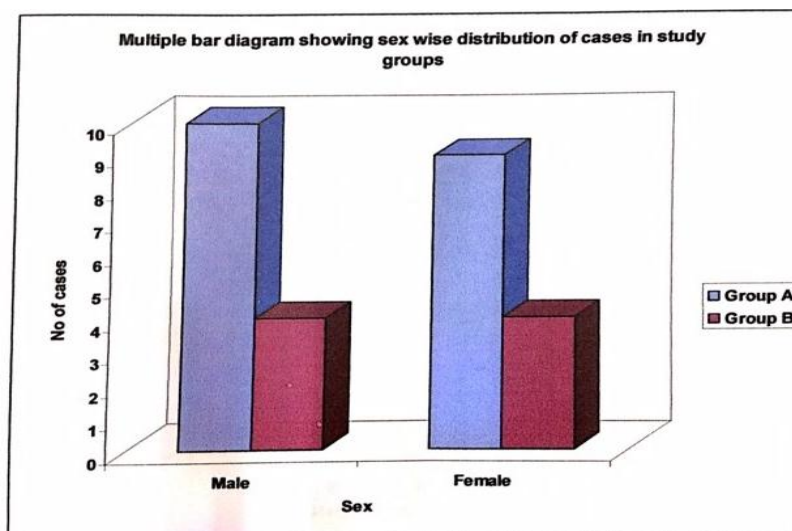


Figure: 2

Table: 3 Comparison of height in study groups.

| Height (cms) on | Group A               | Group B              | t value | P value |
|-----------------|-----------------------|----------------------|---------|---------|
|                 | Mean $\pm$ SD (n =19) | Mean $\pm$ SD (n =8) |         |         |
| 1               | 73.95 $\pm$ 16.83     | 74.23 $\pm$ 16.97    | 0.04    | >0.05   |
| 2               | 76.5 $\pm$ 13.91      | 76.75 $\pm$ 15.63    | 0.05    | >0.05   |
| 3               | 77.87 $\pm$ 13.66     | 78.56 $\pm$ 14.84    | 0.11    | >0.05   |
| 4               | 78.82 $\pm$ 13.15     | 79.57 $\pm$ 14.68    | 0.13    | >0.05   |
| 5               | 79.83 $\pm$ 13.07     | 80.76 $\pm$ 14.32    | 0.16    | >0.05   |
| 6               | 81.47 $\pm$ 13.08     | 81.81 $\pm$ 13.82    | 0.06    | >0.05   |

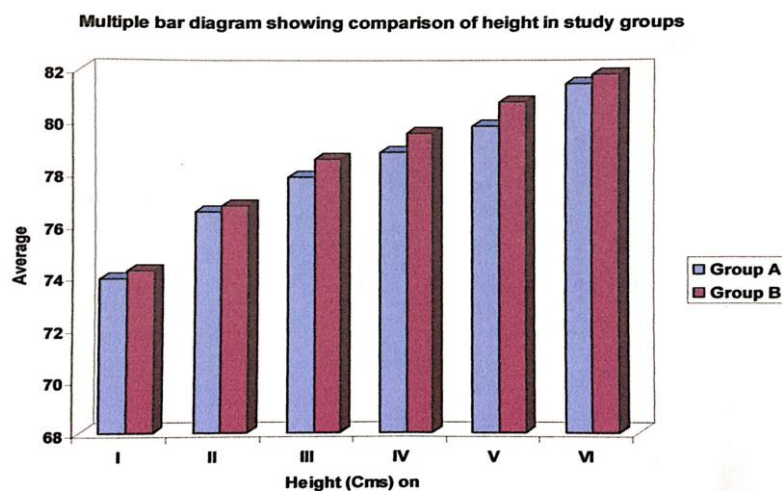


Figure 3

Table 4 : Comparison of weight in study groups.

| Weight (kgs) | Group A              | Group B              | t value | P value |
|--------------|----------------------|----------------------|---------|---------|
|              | Mean $\pm$ SD (n=19) | Mean $\pm$ SD (n= 8) |         |         |
| 1            | 8.65 $\pm$ 3.54      | 8.26 $\pm$ 3.79      | 0.25    | >0.05   |
| 2            | 8.76 $\pm$ 3.33      | 9.11 $\pm$ 3.08      | 0.27    | >0.05   |
| 3            | 9.15 3 $\pm$ .93     | 9.56 $\pm$ 2.94      | 0.30    | >0.05   |
| 4            | 9.98 $\pm$ 3.44      | 9.86 $\pm$ 3.09      | 0.09    | >0.05   |
| 5            | 10.23 $\pm$ 3.51     | 10.26 $\pm$ 2.89     | 0.03    | >0.05   |
| 6            | 10.5 $\pm$ 3.45      | 10.51 $\pm$ 2.69     | 0.01    | >0.05   |

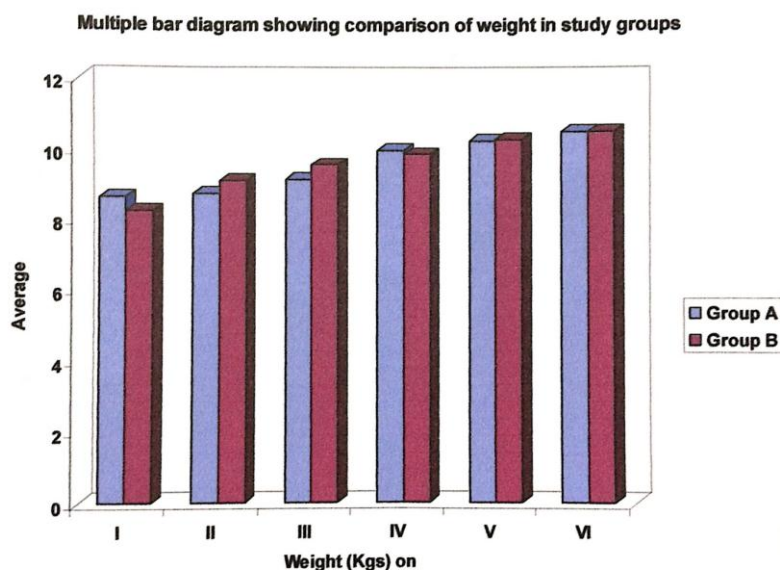


Figure 4

Table 5: Comparison of head circumference in study groups.

| Head circumference | Group A              | Group B             | t value | P value |
|--------------------|----------------------|---------------------|---------|---------|
|                    | Mean $\pm$ SD (n=19) | Mean $\pm$ SD (n=8) |         |         |
| 1                  | 42.71 $\pm$ 4.02     | 42.73 $\pm$ 4.98    | 0.01    | >0.05   |
| 2                  | 44.21 $\pm$ 3.71     | 44.06 $\pm$ 3.39    | 0.10    | >0.05   |
| 3                  | 44.63 $\pm$ 3.72     | 44.56 $\pm$ 3.38    | 0.05    | >0.05   |
| 4                  | 45.12 $\pm$ 3.82     | 45.06 $\pm$ 3.39    | 0.04    | >0.05   |
| 5                  | 45.5 $\pm$ 3.86      | 46.56 $\pm$ 3.21    | 0.75    | >0.05   |
| 6                  | 45.96 $\pm$ 3.79     | 47.19 $\pm$ 3.12    | 0.87    | >0.05   |

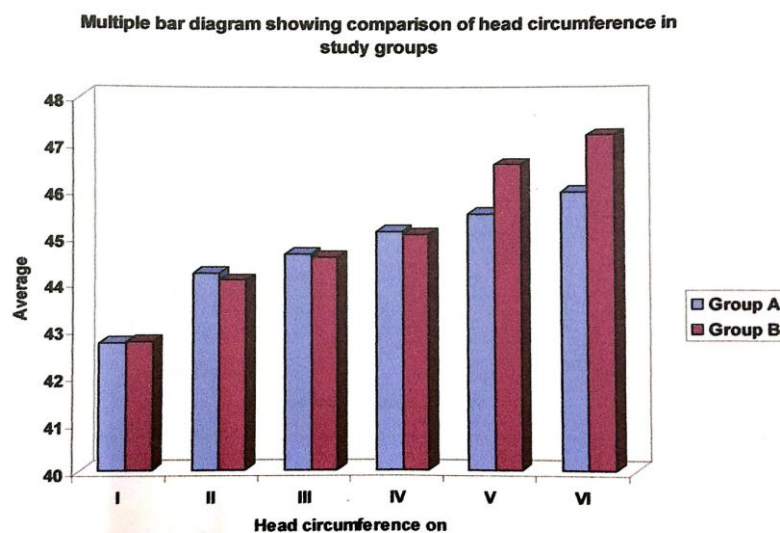


Figure 5

Table: 6 Frequency of illness wise distribution of cases in study groups.

| Frequency of illness | Group A (%) | Group B (%) | Total(%)  |
|----------------------|-------------|-------------|-----------|
| Decrease             | 2(7.41)     | 3(11.11)    | 5(18.52)  |
| No change            | 17(62.96)   | 5(18.52)    | 22(81.48) |
| Total                | 19(70.37)   | 8(29.63)    | 27(100)   |

$\chi^2=4.80$ ,  $p < 0.05$ .

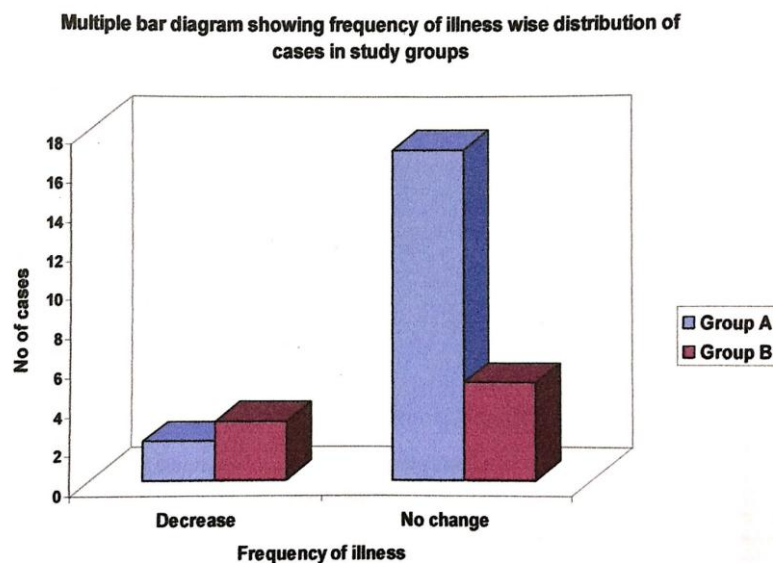


Figure 6

Table 7: Duration of illness wise distribution of cases in study groups.

| Duration of illness | Group A (%) | Group B (%) | Total (%)  |
|---------------------|-------------|-------------|------------|
| Decrease            | 4 (14.81)   | 3 (11.11)   | 7 (25.93)  |
| No change           | 15 (55.56)  | 5 (18.52)   | 20 (74.07) |
| Total               | 19 (70.37)  | 8 (29.63)   | 27 (100)   |

$\chi^2=1.88$ ,  $p > 0.05$ .

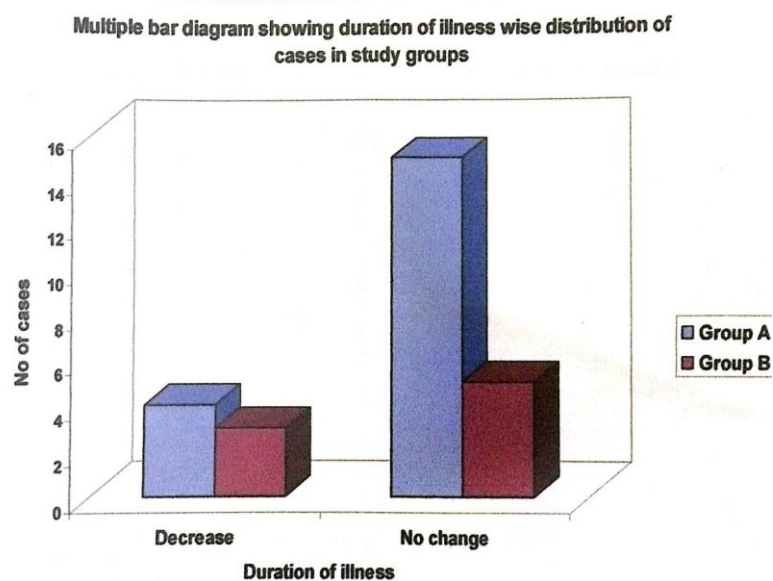


Figure 7

Table: 8 Need of hospitalization wise distribution of cases in study groups.

| Need of hospitalization | Group A (%) | Group (%) | Total (%)  |
|-------------------------|-------------|-----------|------------|
| Decrease                | 4 (14.81)   | 1 (3.71)  | 5 (18.52)  |
| No change               | 15 (55.56)  | 7 (25.93) | 22 (81.48) |
| Total                   | 19 (70.37)  | 8 (29.63) | 27 (100)   |

$\chi^2=0.00004$ ,  $p > 0.05$ .

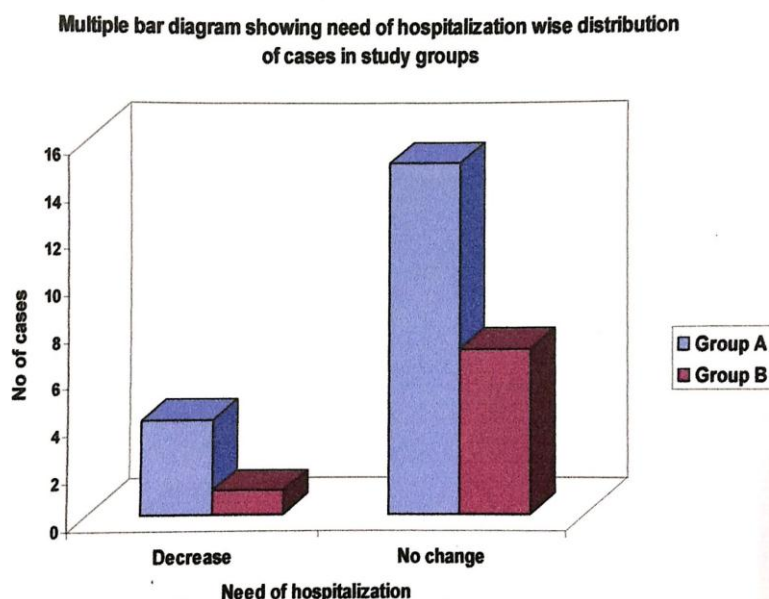


Figure 8

Table: 9 Severity of illness wise distribution of cases in study groups.

| Severity of illness | Group A (%) | Group B (%) | Total (%)  |
|---------------------|-------------|-------------|------------|
| Decrease            | 2 (7.41)    | 1 (3.70)    | 3 (11.11)  |
| No change           | 17 (62.96)  | 7 (25.93)   | 24 (88.89) |
| Total               | 19 (70.37)  | 8 (29.63)   | 27 (100)   |

$\chi^2=0.67$ ,  $p > 0.05$ .

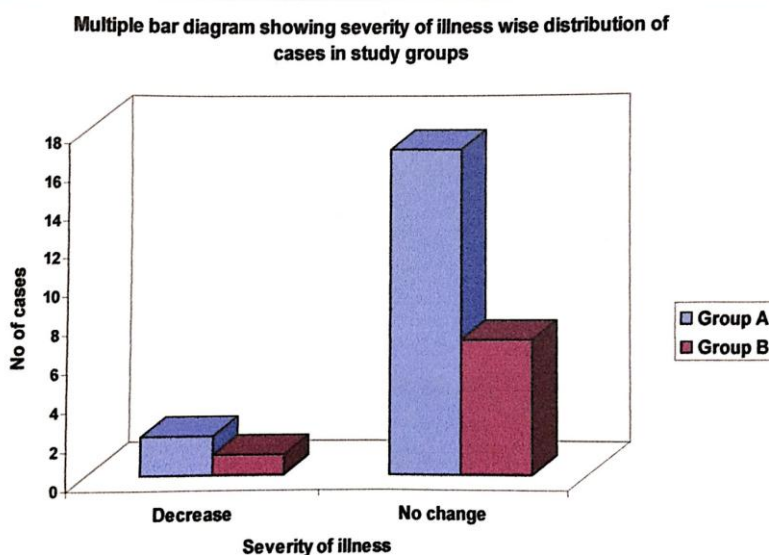


Figure 9

## DISCUSSION

Group A (*Suvarna bhasma*).

Group B (*Suvarna shalaka*).

**Table 1:** The mean age group in group A in 19 subjects is 1.34. While in group B is found in 8 subjects is 1.65.

**Table 2:** There were 10 males and 9 females in group A. While there were 4 males and 4 females in group B.

**Table 3:** The increase in height in both the groups is found to be similar. The variation seen in graph is due to discrimination in the no of subjects in the study.

To comment on height the study should be carried out for a longer time period. The present study of 6 months is not sufficient to come to the conclusion regarding increase in height.

**Table 4:** The increase in weight in both the groups is found to be similar. The variation seen in graph is due to discrimination in the no of subjects in the study.

To comment on weight the study should be carried out for a longer time period. The present study of 6 months is not sufficient to come to the conclusion regarding increase in weight.

**Table 5:** The increase in head circumference in both the groups is found to be similar. The variation seen in graph is due to discrimination in the no of subjects in the study.

To comment on head circumference the study should be carried out for a longer time period. The present study of 6 months is not sufficient to come to the conclusion regarding increase in head circumference.

**Table 6:** From the present graph plotted for the decrease in frequency of illness it can be seen that the p value is significant for the decrease in frequency of illness as the p value is  $< 0.05$ .

**Table 7:** From the present graph it can be seen that though the p value is not significant for the decrease in the duration of illness, its noteworthy that at least the duration of illness has not increased in both the groups A and B, either there is no change or it has decreased.

**Table 8:** From the present graph it can be seen that though the p value is not significant for the decrease in the need of hospitalization, its noteworthy that at least the need of hospitalization has not increased in both the groups A and B, either there is no change or it has decreased.

**Table 9:** In the present graph it can be seen that though the p value is not significant for the decrease in the severity of illness, its noteworthy that at least the severity of illness has not increased in both the groups A and B, either there is no change or it has decreased.

## CONCLUSION

- The present study has not shown any clinical adverse effects on any subjects which proves that the present drug is not harmful for use in children.
- The present study shows same effects of *suvarna bhasma* and *suvarna shalaka* in children.
- This small study has revealed significant results in decreasing the frequency of illness.
- This shows that the drug is very helpful in the growth and development of the child.

## LIMITATIONS

The present study was limited to single geographical area. Sample size was very small.

## RECOMMENDATIONS

Further study is humbly recommended. Need have work multicentric, control group and better sample size is required.

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