

## ROLE OF SHATAVARI KALP IN MALNOURISHED CHILD

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### ABSTRACT

Malnutrition is a biggest challenge for developing countries. WHO has given lots of guidelines to classify, diagnose & treat malnutrition, still recommendations are changing. Lots of research going on pediatric nutrition. The herbal compound, SHATAVARI KALP will prove better solution, as it is safe compatible & easily administrable. In the proposed study 20 patients in each group were taken under 5 yrs. of age, experimental & control. Control group administered with food supplement recommended by ICDS. The experimental group was given shatavari kalp along with food supplement recommended by ICDS. Dose of shatavari kalp was 10 gms. with cow's milk 100ml bid. Out of 21 patients in experimental group, those who were up to 3 yrs. of age shows significant results i.e. wt gain at  $p < 0.05$ . There was also increase in wt in annand group (in experimental group) i.e.  $> 3$  yrs of age but was statistically insignificant. There was wt gain in sheerannand group of control i.e.  $< 3$  yrs of age but was statistically insignificant as there was decrease in wt in annad children in control group.

**Keywords:** SHATAVARI KALP, ICDS, sheerannand.

### INTRODUCTION

P.E.M. in children has become quite total and burning national health issue. Probably it's surveyed in each and every state of the country but some of the state and zones are more prone and affected which this current clinical issue disaster. Maharashtra is one of them and most leading state so for malnutrition in children is concern. The worst affected area of Maharashtra state is Melghat of Vidarbha zone. Where death toll in children due to malnutrition has been recorded much more in comparison to other zones of the state. This problematic issue has become burning agenda before the government. In spite of several effective steps this pediatric problem is still remained as such. It shows that apart of poverty, some other causative factors might be responsible

in development of this nutritional disorder specially in beginning age of the children. In this circumstances researchers should be very sensitive to resolve this problem by using certain relevant remedies. In ancient India our Aacharyas were quite prompt and curious for maintenance of the health from preventive as well as curative aspects of this disease. Aacharyas Kashyap who is known as father of pediatrics has mentioned Shatavari Kalp in kalpasthan of Kashyap Samhita as an ideal remedy for such type of nutritional disorder. After minute and sincere observation of Shatavari Kalp, present project was accepted for clinical trial in malnourished children. It is well known truth that the drug is available everywhere throughout the country. Methodological and

Pharmacological studies revealed that the drug is quite safe from every corner and easily acceptable to the children. Present scientific project has mainly got two components literary and clinical research. In literary research the disease is to be studied by compiling the subject from revision of the Ayurvedic texts as well as from the pediatric books. In clinical research part it is proposed that malnourished pediatric patient of certain age group (0 to 5 years) would be tried on with proposed drug for certain prescribed period (One Month).

**AIMS AND OBJECTIVES:** Research project

**The role SHATAVARI KALP in (MALNOURISHED CHILD) P.E.M. (BALKRISH/SHISHUKARSHYA)**

1. Clinical Assessment of shatavari kalp.
2. Standardization of the drug.
3. To establish proper nomenclature of P.E.M. in Ayurvedic text.
4. To search out an ideal substitute for P.E.M. or Shishukarshya like fatal pediatric disorder.
5. To make available ideal solution to malnutrition
6. To assess changes in nutritional status of children, under study and control group.
7. To develop an integrated approach to reduce prevalence of malnutrition in children.

**REVIEW OF LITERATURE:** There is no diseases is mention in the Ayurvedic literature which resembles the complete signs and symptoms of malnutrition (P.E.M.).

**MATERIALS AND METHODS**

**Clinical Study**

**Aims:**

1. To see the effect of Indegenous herbal compound shatavari kalp in management of malnutrition.
2. To assess an effect by weight gain and anthropometric.

**Null Hypothesis:** No change in wt. after administration of herbal drug.

**Alternate Hypothesis:**Indigenous drug is effective in case of weight gain.

**Materials:**

**A) Patient:** Children of age group 0 to 5 yrs. were selected from anganwadi of urban area located in Nagpur with kind permission and help of concerned child development programmed officer. Integrated child development scheme, urban project and his associates, Selected patients were registered at OPD of Pakwasa Samanvaya Rugnalaya , Nagpur.

**B) Selection of drug** was done on the basis of classical reference from kashyap Samhita. The description of properties of drug with phytochemistry has been described under drug review.

**C) The preparation of drug** will be done as per the norms laid down under the G.M.P. act 1960 and will be standardized.

**Dose and Carrier:** 5-10 gms of Shatavari kalp as per Age +200ml of milk daily.

**Selection of Patients:** Out of 700 children attending anganwadi (ICDS beneficiaries) 40 children were selected, the criteria of selection was.

I) Inclusion criteria

II) Exclusion criteria

**Groups:**

1. Experimental group:- Children in this group received shatavari kalp with milk along with food and health supplement from ICDS.

2. Control group: - Children in this group received only food and health supplement from ICDS.

**METHOD:** This research project was done in Shree Ayurvedic College and hospital along with cordial support of ICDS, Great Nag Road, Nagpur. The Reserch project was designed in the form of comparative study format in which 700 children were screened out of which 40 children of either sex were selected randomly and 20-20 children were placed in two groups.

**Selection of Patient:** Children in the age of 0-5yrs were selected as per wt. for age and grade of malnutrition. Patient from I to III grade of malnutrition selected accordingly. The study will be completed in two groups treated and control group respectively with equally selected patients for proper assessment of the result. On other hands these scientific projects enclose the following:

1. Contains two place works.
2. Review of drugs and disease.
3. Materials and method.
4. Laboratory Investigation.
5. Exempted criteria from the disease.
6. Clinical observation and survey of patient.
7. Collection of the Data's.
8. Statistical study Standardization of the Drug.
9. Dicussion.
10. Summary in conclusion.
11. Bibliography.

Then the study is designed on scientific ground and proposed to the completed, within 18 months. Although on the same research line there might be possibility that other research centers could have worked out but to the best of my knowledge, present research project is untouched and quiet fresh.

## DISCUSSION

1. **Demographic data:** Age, sex, religion and demographic status are mentioned.
2. Age is expressed in mean and standard deviation (SD).
3. **Efficacy Analysis:** Efficacy analysis is done by evaluating the weight at the beginning and one month after the treatment with shatavari and control in malnourished children. Data are expressed as mean and standard deviation. Independent sample t-test and paired t-test is used to analyze the data.
4. For statistical comparison, p value  $\leq 0.05$  is considered statistically significant.

## RESULT

1. **Disposition of subjects:** Total 43 malnourished children were enrolled in the study. 23 children of them belong to shatavari (treatment) group and 20 children to the control group. All children completed the study except 2 children, one child in the treatment group died and one absconded so only 21 subjects were considered for analysis in the treatment group.

### 2. Demography of subjects:

**2.1 Age:** The mean age of the subjects was 2.6 years (1.4 years) in the treatment group and 2.8 years (1.3 years) in the control group.

**2.2 Sex:** In the treatment group there are 13 females and 8 males. And in the control group there are 13 females and 7 males.

### 3. Analysis for malnourishment:

**3.1 Weight in the treatment group:** The mean weight of malnourished children in the treatment group increased from 8221.42 gms (1944.27 gms) before the treatment to 8733.33 gms (2304.41 gms) at the end of 1 month. The difference is statistically significant ( $p < 0.05$ ).

**3.2 Weight in the control group:** The mean weight of malnourished children in the control group decreases slightly from 8615 gms (1812.31 gms) before treatment to 8605 gms(1817.30 gms) at the end of 1 month. The difference is not statistically significant.

#### **4. Analysis according to avastha:**

**4.1 Avastha(annad) in the treatment group:** The mean weight of malnourished children increased from 9845.45 gms (1181.83 gms) before treatment to 10400 gms(1907.35gms) at the end of 1 month. The difference is not statistically significant.

**4.2 Avastha(shreeannad) in the treatment group:** The mean weight of malnourished children increased from 6594.44 gms (543.39 gms) before treatment to 7077.77 gms(593.24gms) at the end of 1 month. The difference is statistically significant. (0.05).

**4.3 Avastha(annad) in the control group:** The mean weight of malnourished children decreased slightly from 9307.69 gms (1436.69 gms) before treatment to 9230.76 gms(1466.50gms) at the end of 1 month. The difference is not statistically significant.

**4.4 Avastha(shreeannad) in the control group:** The mean weight of malnourished children increased from 7916.66 gms (1028.42 gms) before treatment to 8033.33 gms(1016.69gms) at the end of 1 month. The difference is not statistically significant.

**5. WHO classification:** When we divide the patients according to WHO classification of protein energy malnutrition (PEM),we find that maximum number of subjects falls in between 2 to 3 standard deviation in both groups. In the shatavari group, 38.10% subjects belong to 2 SD before treatment and 47.62% belong to 3 SD. After treatment with shatavari percentage percentage in the 2 SD increases to 52.38% and also subjects belonging to 1 to 0 SD increases to 9.52%

while subjects belonging to 3 SD decreases to 19.05%. In the control group 25% subjects belong to 2 SD before treatment and 55% belongs to 3 SD. After treatment with control percentage in the 2 SD increases to 50% and subjects belonging to 1 decreases to 5% while subjects belonging to 3 SD decreases to 30%.Though there is decrease in malnourishment in both groups, it decreases significantly in the treatment group.

#### **CONCLUSION**

The proposed study filled as P E M (ShishuKarshya /BalKrisha) is summarized and concluded as under.

1. Shishu Karshya is a new nomenclature for malnutrition(PEM) in children.
2. The disease is different to fakka or other similar disorder.
3. The disease is irrelevant to sex,caste and religion.
4. It is observed that socio-economic status has got measure role in creation of the disease. Where poverty is main observed criteria.
5. Clinical survey reveals that control group of the patients have got no significant result were as satisfactory and significant results where observed in treated group.
6. Shatavari Kalp proves its efficacy as it is described in Kashyap Samhita.
7. Scientific analysis specially assayof glycoside , and active principle of the drug proves the same which was observed in clinical trials of the patient.
8. Undertaking project may be repeated for the more accuracy in result in post-doctoral research.
9. Modulation in treatment of annaad group is required as suggested in shushruta in age classification.

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