

A comparative study of individualized homoeopathic medicine versus alfalfa tonic in management of under-nutrition in the age group of 1-5 years—randomized control trial

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Abstract

Background: Undernutrition among under five children in India is a major public health problem. Despite India's growth in the economy, the child mortality rate due to under nutrition is still high in both urban and rural areas. Studies that focus on urban slums are scarce. Hence, the present study was carried out to assess the prevalence and determinants of under nutrition in children under five in Maharashtra, India. **OBJECTIVES:-**Primary objective-To study the effectiveness of Alfalfa tonic in BMI of children who suffering from Under nutrition. Secondary objective-To study the effectiveness so find individualized homoeopathic medicine in BMI of children who suffering from Under nutrition. **Design:-**This is a randomized control trial where a protocol is drawn and accordingly patients were selected. **Materials and methods-**Study design:-A randomized control trial. Study Setting:-M(N)HMC OPD and Village Camps. Study Duration:-6months Eligibility criteria:-a)Inclusion criteria:-1)patients of age group 1-5years 2)Sex—both 3)Children's parents giving consent to take medicine. 4) Grade I and Grade II from Gomez classification b)Exclusion criteria:-1)Age below 1 year and above 5 years. 2) Known case of any major illness. 3) Grade III from Gomez classification. **Result-**As our first objective was-To study the effectiveness of homeopathic individualized medicine in BMI of children who suffering from under nutrition, so the result was 24 Patients were prescribed with Group-A in which 12 patients showed improvement and 12 patients were in grade-I. According to Gomez classification-50% (12) cases came under Grade-Normal and 50% (12) Cases comes under Grade-I which was before in grade-I and grade-II.

Second objective was-To study the effectiveness of Alfalfa tonic in BMI of children suffering from under nutrition, so the result was 24 Patients were prescribed with Group-B in which 23 patients showed improvement and only 1 patients were in grade-I. According to Gomez classification-91.66% (23) cases came under Grade-Normal and 8.33% (1) cases comes under Grade-I, which was before in grade-II. **Conclusion-**By comparing the result of both individualized homoeopathic medicine (group A) and Alfalfa tonic (group B).

Hence, we concluded that both group are effective in the management of under nutrition in the age group of 1-5 years but according to our statistical analysis, alfalfa tonic (Group-B) is more effective than individualized homoeopathic medicine.

Keywords:-Under-nutrition, BMI, Gomez classification, Alfalfa tonic, Homoeopathic individualized medicine.

Introduction-Under-nutrition denotes insufficient intake of energy and nutrients to meet an individual's needs to maintain good health.⁽¹⁾

According to the article published in 2020, Prevalence of under nutrition among under 5 children according to the national family health survey 4 in India shows that 35.7% under 5 children were underweight, 38.4% stunted and 21% were wasting.

Every year International Food Policy and Research Institute (IFPRI) publish the Global Hunger Index (GHI). According to the report for 2019, India ranked 102 out of 119 countries.⁽³⁾

Under-nutrition among under five children in India is a major public health problem. Despite India's growth in the economy, the child mortality rate due to under-nutrition is still high.

Malnutrition in the form of under-nutrition, namely under weight, stunting and wasting has been coined as the “silent emergency” by the United Nations children’s fund. The consequences of malnutrition are increased in childhood death and future adult disability, including diet- related non-communicable diseases (NCDs), as well as enormous economic and human capital costs.

Review of Literature:

Definition:-A pathological state resulting from a relative absolute deficiencies or excess of one or more essential nutrients is stated as Malnutrition.(4) There remain regions of the world, particularly rural Africa, where under-nutrition due to famine is endemic, the prevalence of BMI of less than 18.5 kg/m² in adult is as high as 20%, and growth retardation due to undernutrition affect 50% of children.

The WHO reports that chronic undernutrition is responsible for

More than half of all childhood deaths worldwide.(4) Malnutrition comprises four forms-

- 1) Undernutrition
- 2) Overnutrition
- 3) Imbalance
- 4) Specific deficiency

Undernutrition:-This is the condition which results when insufficient food is eaten over an extended period of time in extreme cases it is called starvation.(4) Undernutrition manifests in four broad forms: 1) Stunting (low height for age), 2) Wasting (low weight for height), 3) Underweight (low weight for age) and 4) Micronutrient deficiencies or insufficiencies (a lack of important vitamins and minerals) (2)

Objectives:-

Primary objective-To study the effectiveness of Alfalfa tonic in BMI of children who suffering from under nutrition.

Secondary objective-To study the effectiveness of individualized homoeopathic medicine in BMI of children who suffering from under nutrition.

Methodology-

Study design:-A randomized control trial.

Study Setting:-M(N)HMC OPD and Village Camps.

Study Duration:-6 months

Method of selection of study subject:- (Eligibility criteria)

- a) **Inclusion criteria:**-
 - 1) patients of age group 1-5 years
 - 2) Sex-both
 - 3) Children’s parents giving consent to take medicine.
 - 4) Grade I and Grade II from Gomez classification

- b) **Exclusion criteria:**-
 - 1) Age below 1 year and above 5 years.
 - 2) Known case of any major illness.
 - 3) Grade III from Gomez classification

Withdrawal criteria:-

- If patient is irregular for follow-ups.
- If patient or his/her parents are non-co-operative.

- If the patient starts any other system of medicine during the course/duration of study.

Methods of selection of comparison / control group:-Randomized control trial. **Operational definition-** A sub-acute or chronic state of nutrition in which combination of varying degrees of over or under nutrition and inflammatory activity has led to change in the body composition and diminished functions i.e. weight less than 60 % and mid-arm circumference less than 12.5cm. that represent the state of malnutrition.

- **Specification of instruments and related measurements:** Case record format (CRF), Electronic weighing scale, Height accessing scale (measuring tape), Shakir tape (MUAC)

METHODOLOGY SPECIFIED AND EXPLAINED FOR DATA COLLECTION:-

Target Sample size: 48 patients.

Sampling technique: Systematic Random sampling

Study procedure:-

According to the comparative study, 60 Population was screened and data were collected through inclusion and exclusion criteria by interviewing mothers of under age group of 1-5 years of children. 48 children under age group of 1-5 years were covered with under-weight. Consent was taken from the parents of children followed by Case taking. Health examinations and nutritional history were taken; analysis and evaluation of cases were done. 24 children were prescribed with individualized homoeopathic medicine and 24 children were prescribed with Alfalfa tonic and after took 6th follow up at interval of 15 days and then conclusion was made. This study was carried out to identify the determinants of child nutritional status separately in age group of 1-5years

Intervention-Alfalfa tonic and individualized homoeopathic medicine was prescribed to the cases diagnosed with under-nourished child. The repetition of dose was done according to the conditions during follow up time, if patients were improving the dose was not repeated or vice versa.

Statistical Analysis-We have taken before & after BMI by height and weight during health examination, the mean value of group -A was-0.837 & the mean value of group-B was-1.6. Then we use Student paired T test for both the groups, to see the result of the study. As the calculated T value of group- A is-5.7044 was greater than table t value at the level of significance(5%) that is 2.07. It is also rejected at 0.01 L.O.S. In group-B, the calculated T value is-9.2646 was greater than table t value at the level of significance (5%) that is 2.07. It is also rejected at 0.01 L.O.S therefore; we can say that both are highly significant. We also used the student unpaired t-test for to see there is difference or no effectiveness in between individualized homoeopathic medicine and alfalfa tonic. Here, the result is significant as P value is <0.05. $3.4375 > 2.02$ i.e. calculated t value is greater than the table value of t- at 0.05 L.O.S, and hence we accepted hypothesis, H₁ accepted.

Hence, it is proved Alfalfa tonic is more effective in the management of under nutrition in age group of 1-5years.

Result-As our first objective was-To study the effectiveness of homeopathic individualized medicine in BMI of children who suffering from under nutrition, so the result was 24 patients were prescribed with Group- A in which 12 patients showed improvement and 12 patients are in grade-I.

According to Gomez classification -50% (12) cases comes under Grade –Normal and 50% (12) Cases come under Grade-I which was before in grade-I and grade-II.

Second objective was-To study the effectiveness of Alfalfa tonic in BMI of children who suffering from under nutrition, so the result was 24 patients were prescribed with Group-B in which 23 patients showed improvement and only 1 patients are in grade-I.

According to Gomez classification- 91.66% (23) cases comes under Grade- Normal and 8.33 % (1) cases comes under Grade -I, which was before in grade-II.

Table no.06 – Improvement of cases in group-A and group-B.

	Improving	Improved	Not improved
Group-A(Control group)	4	13	7
Group-B(Study group)	0	23	1

Graph no.06 Improvement of cases in group- A and group-B.

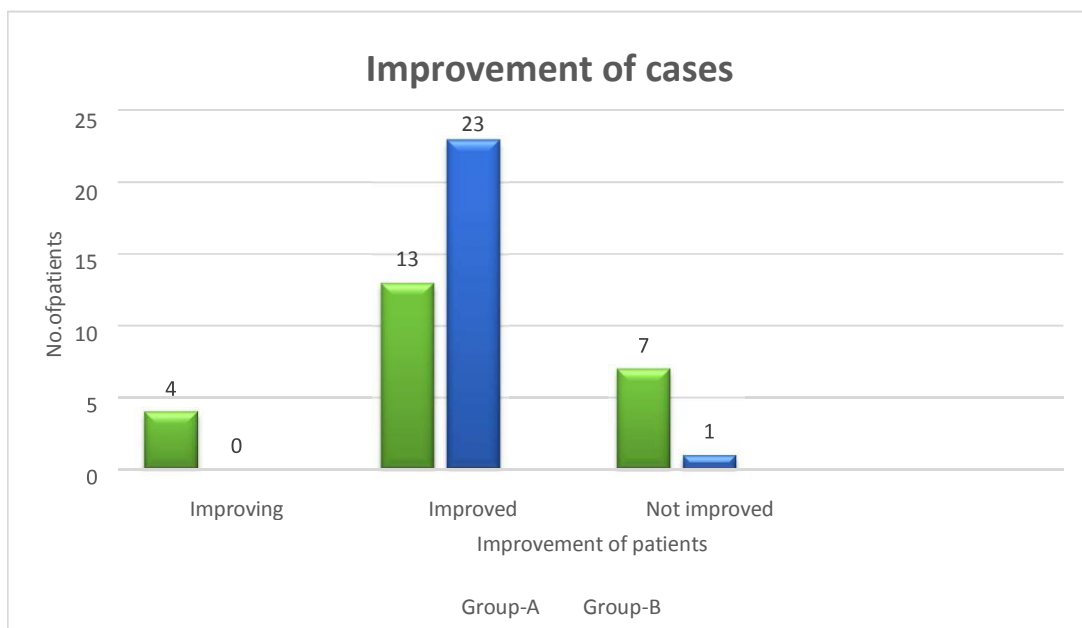
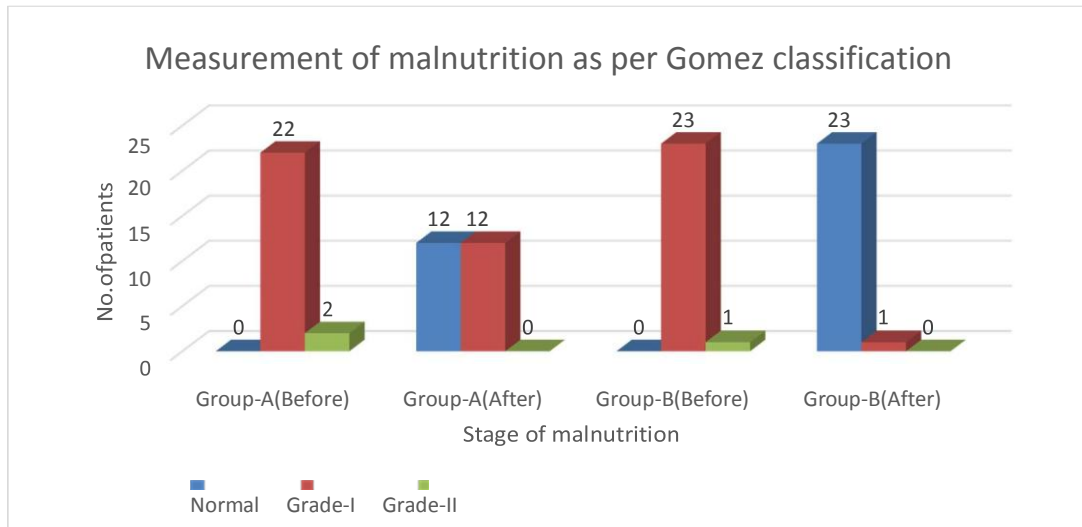


Table no. 2 Measurements of malnutrition as per Gomez classification.

Under-nourished child	Group-A (Before)	Group-A (After)	Group-B (Before)	Group-B (After)
Normal	0	12	0	23
Grade-I	22	12	23	01

Grade-II	02	0	1	0
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Graph No.2 Measurements of malnutrition as per Gomez classification.



Discussion-

We had done screening in patients of M.(N.)H.M.C. OPD, Jalalpur village area. Total 60 numbers of patients were included in screening.

From the screening and according to inclusion-exclusion criteria 48 patients were taken. This study was conducted in M(N)HMC OPD and Jalalpur village.

The aim behind choosing such topic was progressing the health issues due to under nutrition in the age group of 1-5 years and also to know the effectiveness of Alfalfa tonic in the management of under nutrition in the age group of 1-5years.

In screening we came to know that grade-I degree of malnourished child are more than grade-II degree of malnourished child.

From 60 patients near about 80% children are suffered from grade-I degree of malnutrition and only 20% children are suffered from grade –II degree of malnutrition.

Thus, we conducted study on total 48 patients. In which 24 cases prescribed with homoeopathic constitutional medicine and 24 patients prescribed with ‘Alfalfa tonic

After 6th follow up, 34 patients are improved and 14 patients are under grade –I degree of malnutrition.

In Group A (Control group),50% cases are completely improved,50% cases are in grade-I. In

Group B (Study group),91.66% cases are completely improved,8.33% cases are in grade-

I. Thus, we concluded that Alfalfa tonic having more result in reducing the complaints of under nutrition than individualized homoeopathic medicine.

Conclusion-

By comparing the result of both individualized homoeopathic medicine (group A) and Alfalfa tonic (group B).

Hence, we concluded that both group are effective in the management of under nutrition in the

age group of 1-5years but according to our statistical analysis, alfalfa tonic (Group-B) is more effective than individualized homoeopathic medicine.

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