

A Clinical Study to Re-Evaluate the Efficacy of Vidari Churna on Krusha

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Abstract: This paper presents an overview of a clinical study to re-evaluate the efficacy of vidari churna on krusha

Keywords: clinical study, reevaluate, efficacy, vidari, churna, krusha.

1. Introduction

The study has been done on “a clinical study to re-evaluate the efficacy of vidari churna on krusha.” Importance of study of Kaumarbhritya is to make the child potential for growth and development. Healthy children are our nation’s pride. These healthy children transform as healthy adult under proper attention. Pathological condition arising from coincidental lack in varying proportion of protein and calories. So the Underweight children are failure to maintain their weight or growth rate and muscle mass leading to dysfunction of many vital organs. The importance of the childhood was well recognized in Ayurveda as one of the eight branch of Ayurveda was dedicated to the Bala i.e. children. Acharya Kashyapa placed Kaumarbhritya above all the other eight branches in Kashyapa Samhita. He justified it by quoting –

कौमारभृत्यमष्टानाम तन्नाणामाद्यामुच्यते ।
आयुर्वेदस्य महतो देवानमिव हव्यपः ॥
अनेन हि संवर्धित्मितरे चिकित्सन्ति ॥
का.वि.पू. ६१

Though much of the literature dealing with Kaumarbhritya is mutilated even the available matter gives a glimpse of the property of this branch in the golden era. The recent demographic studies report that 1/3 of the world’s population is of children below 15 years of age. These statistics definitely increase the responsibility of pediatric community from Ayurveda as well as modern contemporary science towards the society.

A. Need for study

Underweight children are a hard social indicator. In addition to the care of the individual patient, the only way in which we can hope to eradicate malnutrition permanently from a community is by an all-round improvement in living conditions, rising of the socio-economic status, increasing food Production, improving sanitation, and raising the standard of education and population control. Besides correcting the deficiency of one or

more nutrients by various supplements and provision of a diet adequate in calories, proteins, fats and nutrients, it is highly desirable to give the safe and non-hormonal anabolic drugs also (Brumhana drugs) to make proper utilization of the food taken and to fasten the catch-up growth of the body.

2. Aim and Objectives

1. To study the efficacy of Vidari on Krusha.
2. To study the etiology of Krusha in children.

3. Disease Review Krusha

Acharya Charaka in Sutrasthana 21st chapter has described 8 type of undesirable person from treatment point of view, Atikrusha is one of them. Untimely and little than the required food is prime factor in producing krusha. Tikta, Katu, and Kashaya Rasas are supposed to produce Krusha. Krushangata has been included in the Rasa Pradoshaja Vyadhi. In Sushruta Samhita AtiKrusha has been described with its Nidana, Samprapti Lakshana and Chikitsa .On Sushruta Sutra chapter 15 Acharya Dalhana comments as,

कार्श्य मांसक्षयः।

In addition to above reference, the word Krusha has been used at many places under different contexts. In A.S. Atikrusha has been described along with Atisthula in 24th chapter of sutra sthana. A.H. has not devoted any separate paragraph for describing the symptomatology of krusha though its treatment has been mentioned. Bhavaprakash has been devoted a separate chapter “Krushadhikar for describing the symptomatology, aetiology, pathogenesis, prognosis and treatment of krish person. Sharangadhar had included it under the heading of Nanatmaja Vyadhi of Vata, those diseases caused absolutely by Vata Dosha. Acharya Kashyapa includes the condition Krusha as a disease caused by Vata.

A. Krusha as a separate disease

Acharya Charaka observes that in cases where lakshana of disease manifest independently, then they are considered as a separate disease. Likewise when the lakshanas appears as a part of disease then they are not called as an independent disease. In the present study Krusha not a complication of any disease condition or has not a cause of any diseased condition has been taken into consideration. It may be said that a lean and thin

looking person having no other complaint may be taken as Krusha. But if it persists for a longer period it may lead in to Balshosha and Parigarbhika when Krusha occurs at early infancy. If Krusha occurs at later childhood and persist for a longer period than it may lead to AtiKrusha. It is clear from mentioned references that Krusha represents a Mild form of Malnutrition while others represent severe degree of malnutrition. Nutritional deficiency disorder in children is classified into groups.

1. Mild/ Moderate Form - Krusha
2. Severe Form - Parigarbhika - Bal shosha, AtiKrusha

4. Nidana (Aetiology of Krusha)

The etiological factors of Krusha can be broadly classified under three separate Headings-

1. Aharaja – (a) qualitative (b) quantitative [Ch. su 21/10-12]
 2. Viharaja – (a) sharirika (b) mansika [Su. su 15/33]
 3. Others- [Bh.Pra.chi 40/400]
- 1) *Aharaja: Qualitative*
 1. Rukshaannapana
 2. Vatika annapana
 3. Kashaya, Katu, Tikta Rasa sevana
 - 2) *Quantitative*
 1. Alpashana
 2. Pramitashana
 3. Anashana
 4. Langhana
 5. Upavasa
 - 3) *Viharaja: Sharirik*
 1. Kriyatiyoga
 2. Ativyayam
 3. Mala mutradi nigras
 4. Ruksha snana
 5. Ruksha Udvaratana
 6. Ati Adhyayana
 7. Vata sevana
 8. Atapa sevana
 9. Dukhashayya
 10. Dukha asana
 11. Balavata Nigras
 12. Ati Bhargamana
 13. Kapha Ativartana
 14. Shonita ati Vartana
 15. Mala ativartana
 - 4) *Others*
 1. Vatika prakriti
 2. Nitya rogi
 3. Grishma ritu
 4. Bhutabhighataja

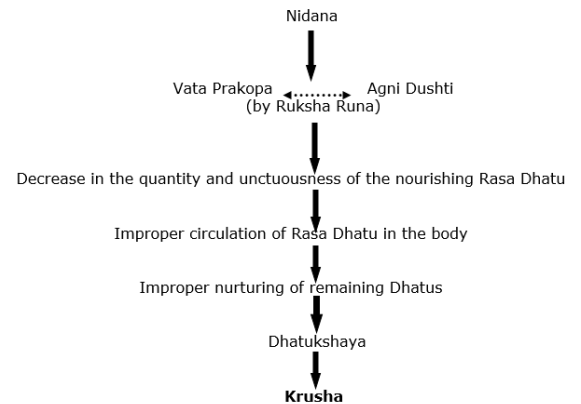
5. Rupa of Krusha

Detail description of clinical sign and symptoms is carried out on the basis of symptomatology of AtiKrusha. (Ch. Su. 21/13-15). These sign and symptoms of Krusha can be broadly arranged in two separate headings

- 1) *Pratyatma lakshana (cardinal sign and symptoms)*
 1. Sushka Sphika

2. Sushka Udara
 3. Sushka Griva Dhamani
 4. Jala Darshana
 5. Tvaga Asthi Shesha
 6. Vata Roga
 7. Prayah Sthula Parva
- 2) *Samanya lakshana (associated sign and symptoms)*
 1. Vyayam Asahishnuta
 2. Atisauhitya Asahishnuta
 3. Kashuta Nigras Asahishnuta
 4. Pipasa Nigras Asahishnuta
 5. Mahoushadha Asahishnuta
 6. Ati shita Asahishnuta
 7. Ati ushna Asahishnuta
 8. Maithuna Asahishnuta
 9. Kriyashu Alpa Prana
 10. Rkta Pittaja Amaya
 11. Sthula Anana
 - 3) *Modern Symptoms*
 1. Wasting of buttock, abdomen & neck, calf muscles
 2. Due to this veins of the body become visible
 3. Only skin and bones are left to seen
 4. Head and joints relatively looks larger
 5. Wrinkles
 6. Body ache
 7. Whole body becomes thin

6. Samprapti of Krusha



7. Drug: Vidari

- Kula: Shimbi Kula
 - Family: Tuberia Puperosa
 - Gana: Balya, Bruhana, Varnya, Kanthya, Snehopag, Madhurvarga, Vidarigandhadi, Vallipanchamoola, Pittashaman.
 - Latin name: Pueraria tuberosa.
 - Sanskrit Names: Swadukand, Sita, Ikshugandha, Payaswini, Vrushyakanada, Bhukushmadi, Shukla, Varad, Varahvadana.
- 1) *Chemical composition:*
 - Total Carbohydrates - 85.1%
 - Crude Fibres - 28.4%
 - Crude Proteins - 10.9%

- Isoflavone - (Glycoside-4', 6''- diacetyl- puerarin),
- Polyphenol, Gluconic acid, Malic acid
- Part used: Tuber
- Dose: Dried Powder of Tuber 2 to 6 gms with Milk.
- Rasa - Madhura
- Guna - Guru, Snigdha
- Virya - Shita
- Vipaka - Madhura
- Doshagnata - Vata Pitta Shamaka
- Karma - Brimhaniya, Balya, Rasayana, Jivaniya, Vatahara, Anulomana, Snehana, Hridya, Pittasaraka, Sukrada, Prajasthapana, Stanyajanana, Daha prashamana.
- Rogagnata - Daurbalya, Angamarda, Kshaya, Shosha,
- Mutrakrichchha, Vibandha, Yakrata pleehavridhi

The Ayurvedic Pharmacopeia of India Part-I, Volume 2, 1st edition Page 173.

B. Pharmacological properties

It is unctuous, anabolic, nutritive, carminative, cardio tonic, haemostatic, demulcent, diuretic, complexion enhancer and rejuvenator. Hence it is used to reduce intestinal dryness, in hepato-splenomegaly, cardiac debility, bleeding disorder, hoarseness of voice, cough, dysuria and pthisis.

C. Anupana- Go-dugdha

As per the Ayurvedic classics Ksheera is a Jangama dravya described as Ekantahita dravya used in Pana , Anupana , Nasya , Alepa , Abhangva , Vamana, Asthapana , Virechana , Snehana and Shodhana etc. Ksheera is a general term for the milk of any of the animals. But in Ayurveda, Cow's milk is much appreciated for the therapeutic purposes. Here, in the present context, properties and uses of Cow's milk are given in both the Ayurvedic as well as Modern point of view.

1) Composition of milk

- Water - 87.3%
- Milk fat - 3.9%
- Solids- not fat - 8.8%
- Protein – 3.25%
- Lactose – 4.6%
- Minerals – 0.65% - Ca, P, Mg, K, Na, Zn, CO, Fe, Cu, sulphates, bicarbonates
- Acid – 0.18% - citrates, formats, acetate, lactate, Oxalate.
- Enzymes – peroxidase, catalase, phosphatase, lipase.
- Gases – oxygen, nitrogen.
- Vitamins – A, C, D, thiamine, riboflavin, others.

D. Ayurvedic View

- The Go-dugdha possesses properties like Madhuram, Jivaniyam,
- Prinanam, Rasayanam, Brihanam, Vrishyam, Medhya, Balya, Dipaniya, Shonita pittaharam, Shreshtham etc.
- Rasa: Madhura
- Guna: Guru, Snigdha

- Virya: Shitass
- Vipaka: Madhura
- Doshagnata: Vata-Pitta shamaka
- Karma: Balya, Brimhana, Rasayana, Sandhanakara, Asthapana,
- Vayah- Sthpana, Ojovardhaka Jivaniya, Medhya
- Rogagnata: Kshata Kshaya, Swasa, Kasa, Pandu, Daha, Jwara,
- Mutraroga, etc.

8. Material and Methods

The children age group of 4-12 yrs, including those attending the O.P.D. of Collage and from various medical camps taken in campus of collage with problem of poor weight gain, poor growth, lean and thin body complaints of Daurbalya. After taking a complete history emphasizing on milestones and dietetic history, the study will be carried out after appropriate counseling with parents of children and written consent from parents. Diagnosis of Underweight children will base on IAP criteria.

A. Objective of the study

- To study the efficacy of Vidari on Balkrusha.
- To study the etiology of krusha in children.

B. Material

Criteria for selection of patients: *Inclusion Criteria:*

1. Children of both sex.
2. Children weighing below average body weight for their chronological age.
3. Children in between the age group of 4 - 12 year
4. Children on their regular diet intake.

Body weight: it is considered according to the following table (In Kgs) given by IAP textbook of pediatrics

Table 1
Grades

Age (In yrs)	Grades	
	Grade I	GradeII
4yrs	12.6-14.2	10.8-12.5
5	14.2-16	12.2-14.2
6	15.5-17.5	13.3-14.5
7	17.4-19.6	14.9-17.3
8	19.4-21.8	16-6-19.3
9	21.2-23.9	18.2-21.1
10	23.1-26.1	19.9-23
11	25-28.4	21.5-24.9
12	27.2-30.6	23.4-27.1

Any child weighing Grade I and Grade II according To IAP criteria normal weight shown against the age as per the table above is included for study. After recording the vital data like age, sex, religion, economic status etc. each child was examined in general and for clinical nutritional status in particular. Various physical anthropometric measurements were taken i.e. weight, Mid-arm circumference, height, chest circumference etc. for assessing the growth status of the children. In each child the weight has been recorded initially and in each follow up. Weight was taken in kilograms with platform type balance, capable of detecting a half-kilogram change in body weight. Mid-arm circumference was measured by passing a tape around

the mid-point of Rt arm. This was measured in centimeters.

C. Exclusion Criteria

- Children below the age of 4 years and above 12 years are excluded.
- Children suffering from infectious and chronic systemic illness.
- Children of chromosomal, genetic, metabolic, or congenital disorders Children suffering from chronic diarrhea, primary complex or increased B.M.R. (Basal Metabolic Rate) or suffering from congenital heart disease etc. are not included in the study.
- The children of Grade III and IV malnutrition will be excluded.

D. Method of collection of data

The method of study was by interrogation, examination and collection of details from each child and parents. The nature, purpose, objective of the study was explained to parents before starting the work. The required data was collected, After recording the vital data like age, sex, religion, economic status etc. each child was examined in general and for clinical nutritional status in particular. The ages of the children were obtained from parents. The total children having underweight will be randomly divided in two groups. Same diet, daily regime will be advised to both groups.

1) Grouping of Patients

- Group a (Study group)-30 patients of this group will be administered Vidari churna.
- Group B (Control Group)-30 patients of this group will be administered with Starch granules for the same period.

2) Drugs selected for the study

The following drug were selected for the present study

- Drug:- Vidari
- Family- Leguminosae
- Latin Name -Pueraria Tuberosa

Table 2
Dose and Duration

Study group	Control Group
Vidari Churna	Starch Granules
Dose 04-12 yrs - 800mg to 2.4gm	Dose 04-12 yrs -800mg to 2.4gm
Time - BD	Time - BD
Route of administration - oral route	Route of administration - oral route
Anupan - Milk	Anupan - Milk
Duration - 60 days	Duration - 60 days

Dose of Vidari churna is calculated according to Dillings formula from 800mg to 2.4 gm as per the age.

E. Criteria for assessment of therapy

Preparation of special case paper and observation table

1. Parameters and observation will be based on patient's experience, signs and symptoms before and after treatment.
2. No other treatment period / washout period – required if the patient is already under some other treatment. (Washout period is of 7 days).
3. A case record form or proforma will be designed incorporating various examinations of different

physical and physiological functions from ayurved and modern parameter will be prepared. Positive changes in the score will be considered as criteria of assessment for efficacy.

4. Effect of therapy will be assessed on the basis of anthropometrics and subjective changes before and after the treatment.

The parameters used for assessment are

F. Subjective Type

The assessment is based on improvement in the cardinal sign and symptoms mentioned in Ayurvedic text. Subjective parameters have been used for assessment with the help of following scoring pattern.

1) Daurbalya (Activity)

The activities of child have been taken into consideration for assessment of Daurbalya

- 3- Dull
- 2- Moderately Active
- 1-Active
- 0-Very active

2) Kshudha (Appetite)

- 3- Child does not take food considerably even by force
- 2- Child does not ask but takes food considerably by request
- 1-Child himself ask food but not take adequately
- 0-Child himself asks food and take adequately

3) Dhamani Jala Darshana

- 3- Prominent
- 2- Visible
- 1-Visible and prominent on pressure
- 0-Not visible easily even after pressure

4) Sthula Parva

- 3- Relatively look larger
- 2-Prominent
- 1-Covered
- 0-Deeply seated with extra fat

5) Nidra (Sleep)

- 3 - Crood
- 2 -Diturbed
- 1 -Short but sound
- 0-Long and sound

6) Constipation

- 3 -Irregular for more than 2 days
- 2 -On alternate day
- 1 -Daily but hard stool
- 0-No constipation

7) Appearance

- 3 -Ill at ease
- 2 -Old looking
- 1 -Child look
- Healthy

8) Kapola Gata Vasa (Buccal pad of fat)

- 3 -Cheeks inside with zygomatic bones prominent
- 2 -Cheeks inside
- 1 -On surface level
- 0-Cheeks everted

G. Objective Type

Weight, chest circumference, head circumference, mid arm circumference will be carried out.

1) Physical and anthropometrical measurements

1. Weight in kg (Wt)
2. Height in cm (Ht)
3. Mid arm circumference (MAC)
4. Chest circumference (CC)

For the assessment of growth and Nutritional status, Anthropometric measurement such as height, weight, head circumference, chest circumference, mid arm circumference were recorded. All the measurements were taken as per guideline of world health organization.

2) Method of Sampling

Total of 65 Patients of age group 4yrs to 12yrs were taken for study according their nutritional status.

3) Study Design

A randomized controlled trialed study was carried out during the study period.

4) Statistical Analysis

Data was collected, tabulated, analyzed and percentage wise results were given.

9. Discussion

Children from which study completed is Rural place which is a surrounded mostly by the villages, where ill literacy, poverty and lack of hygiene are observed more, which have an effect on nutritional status, especially of children, except for those from sophisticated families. Thus an overview of children in study area shows that there could be a good number of populations with malnutrition. This necessitates the present study, of assessing the nutritional status of children and providing a statistical reference of malnourished children. Total 33 patients were registered in Vidari Churna group, among them 30 patients had completed the treatment and 3 patients were discontinued, whereas In Group B, total 32 patients were registered amongst them 30 patients had

completed the treatment and 2 patients were Left Against Medical Advice (LAMA). Hence, total 65 patients were registered for the present study, among them 60 patients have completed their treatment and remaining 5 patients were LAMA.

10. Result

The total over all therapy showed that in Group a total improvement is about 80% and no improvement is 20%. In Group A 25% patient showed marked improvement, 12.5% patients showed, 25% showed no improvement, while 27.5% patients showed moderate improvement i.e. maximum. In Group B maximum i.e. 80% patients showed no improvement, 20% patients showed mild improvement, whereas no patients showed moderate and marked improvement. I.e. total improvement is only 20% and no improvement is 80%.

So far no specific work has been done on the mentioned subject in this direction. But few works are found on the subject of Balya and Brimhana or anabolic effect of the Drug in Krusha or Shosha – pradhana vyadhi separately. They are as under.

11. Conclusion

This paper presented an overview of a clinical study to re-evaluate the efficacy of vidari churna on krusha

References

- [1] Anabolic effect of certain Ayurvedic drugs in infancy and childhood. Shashtri Krishna (1983).
- [2] Brimhana effect of certain Ayurvedic drug compound in underweight child Dr. K.S. Patel – (1985).
- [3] A study of nutritional status in children based on Ayurvedic concept. Sharma Surendra (1986).
- [4] Brimhana effect of certain indigenous drug in pediatric practice. Sharma Chamanlal (1987).
- [5] A comparative study on Brimhana effect of Ashvagandha granules and Ashvagandha siddha kshira Basti in Krusha children. V. B. Kori. (1999).
- [6] A clinical study on the effect of vidari churna on balkrusha w.s.r. to underweight children. Dr. Swapnil Bhangale (2012).