

A Comparative clinical study for Brumhan effect of Balaghrita and Ashwagnadhaghrita in Balkarshya w.s.r. to underweight children.”

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Abstract

Importance of study of Kaumarbhritya is to make the child potential for growth and development. Healthy children are our nation's pride. So the Underweight children are failure to maintain their weight or growth rate and muscle mass leading to dysfunction of many vital organs.

Karshya is an Ahara doshaja Vyadhi, Alpashana and Vishamashana are main responsible factors of Karshya . In order to improve health of child, bruhan dravya are used. Bala and ashwagandha plays major role to improve weight of child. Also Bala and Ashwagandha having the property of Srotoshodhana, Vatanulomana, Rasayana, Brumhana which helps in maintaining equilibrium of Dosha Dhatu and Malas. Bala ghrita and Ashwagandha Ghrita improve Daurbalya, Kshudha, Dhamani jala darshana, Sthula parva, Constipation, Appearance and Kapola gata vasa in Balkarshya. The main objectives of the study were to evaluate the efficacy of Bala ghrita and Ashwagandha ghrita and to study the weight gain in underweight children.

Key words – karshya, bala ghruta, ashwagandha ghruta, underweight, bruhan.

Introduction

The Underweight Children fails to maintain their weight or growth rate and muscle mass leading to dysfunction of many vital organs. Similarly the mortality of the children with malnutrition are maximum to which needs much attention to that area to control from the dietetic as well as therapeutic point of view.

In spite of giving proper nutrition, due to improper digestion and assimilation most of the children cannot gain their weight successfully owing to improper metabolic transformation.

The Global Index Report ranked India 15th amongst leading countries with hunger situation. The cases of Underweight Children are more found in developing countries like INDIA leading to complications such as increasing morbidity and mortality rate of children.

Karshya child is majority of times found to be undernourished and underweight which is supported by the reference of Cha. Su.21/3 Ashtauninditiya Adhyaya where Acharya had clearly mentioned Karshya under the broad classification of eight worst personalities given over their.

Aim

To Compare the Brumhan effect of Bala ghrita and Ashwagandha ghrita in Balkarshya with special reference to underweight children.

Objectives

- 1) To study the Brumhan effect of Bala ghrita in Balkarshya.
- 2) To study the Brumhan effect of Ashwagandha ghrita in Balkarshya.
- 3) To compile information on Balkarshya according to Ayurveda and modern literature w.s.r. underweight children.

Review of literature-

Disease review-

KARSHYA

Hetu (etiological factors)

Rukshannapanasevana

- Langhana
- Pramitashana
- Kriyatiyoga
- Shoka, Chinta, Bhaya, Shrama
- Vega–Nidra-Trusha –Kshudha -nigrah
 - Atishrama
 - Atisnanaabhyasha
 - Rukshaudvarta
 - Prakruti, Beejdosha
 - Krodha

Roopa (the signs and symptoms)

1.) Pratyatma Lakshana (cardinal sign and symptoms)

Lakshanas	Ch.Su. 21/13-15	Su.Su. 15/39	A.S.Su. 24/49-50	B.P. U. Ch. 40/3
Sushka sphika	+	-	+	+
Sushka Udara	+	-	+	+
Sushka Griva	+	-	+	+
Dhamani jala darshana	+	-	+	+
Tvaga shisha	+	-	-	+
Vata roga prayah	-	+	+	-
Sthula parva	+	-	+	+

2.) Samanya Lakshana (associated sign and symptoms)

Lakshanas	Ch.su. 21/13-15	Su.su. 15/39	A.S.su. 24/49-50	B.P. U. Ch. 40/3
Vyayam Asahishnuta	+	+	-	-
Atisauhitya Asahishnuta	+	-	-	-
Kashuta Nigraha Asahishnuta	+	+	-	-

Pipasa Nigraha Asahishnuta	+	+	-	-
Mahoushadha Asahishnuta	+	+	-	-
Ati shita Asahishnuta	+	+	-	-
Ati ushna Asahishnuta	+	+	-	-
Kriyashu Alpa prana	-	+	-	-
Rkta Amaya pittaja	-	-	-	-
Sthula Anana	-	-	+	+

Samprapti-

Nidana Sevan –Vatavardhikar Aahara-Vihara

↓
Vataprakopa

↓
Shoshita Rasadhātu

↓
Shushka Rasadhātu anukramati in whole sharira

↓
All dhātu not get nourishment due to alpashushka

↓
Rasadhātu

↓
Karshya Utpati

SAMPRAPTIGHATAK-

Dosha	-	Vata
Dushya	-	Rasa
Srotas	-	Rasavaha
Srotodushti	-	Sang
Adhisthana	-	Pakvashaya
Vyaktisthana	-	Whole body

Treatment-

Principles of management of Karshya -

Karshya being a Vata pradhan Vyadhi mainly occurring due to Dhatukshaya. A general line of treatment i.e. Vata upakrama can be adopted. As specific line of treatment all the Acharyas observed importance of Brumhana therapy. According to Acharya Charaka Brumhana therapy should be Laghu Santarpana in nature. Because in krisha patient Agni, Sharirabala and other aspects are functioning poorly. The principle management of Karshya should be in following manner.

- 1) Nidana Parivarjana
- 2) Samshodhana
- 3) Samshamana
- 4) Ahara
- 5) Vihara

Drugs selected for the study –

Balaghrita and Ashwagandhaghrita drugs were selected for the present study. In present study, Bala ghrita was taken for clinical study which has no direct reference. But Bala has been described in charaksamhita as a brumhan dravya. Ashwagandhaghrita is described in Yogratnakar.

1) Balaghrita –

One part of Balakalka + four part of Goghrita (ghee) + 16 parts of Godugdha (milk) - Manda agni - Ghrita sidhalakshan- Balaghrita

2)Ashwagandhaghrita -

One fourth part of Ashawagandha kalka + one part of Goghrita (ghee) + 8 parts of Godugdha (milk)- Manda agni - Ghrita sidhalakshan- Ashwagandhaghrita
Anupanam – Milk

DRUG REVIEW-

Dra vya	Latin Name	Famil y	Ra s	Vi pa k	V ir ya	Gun a	Karm ukta (Actio n)	Gana
Bala	Sida Cor difolia	Malva cea ceae	madhur	Madhura	Sheeta	guru, snigdha, pichchila	vatahama	Balya , Bruhaniya , Prajasthapanana Madhurs kandha
Ashwagandha	Withania somnifera	Solanaceae	Madhura, Kashaya, Tikta	Madhura	Ushna	Laghu , Snigdha	Kaphavatahama	Balya , Bruhaniya , Madhurs kandha

Material And Methods

Material –

SELECTION CRITERIA OF PATIENTS –

1) INCLUSION CRITERIA –

- 1) Age group between 5 yrs. to 12yrs.
- 2) Patient of irrespective of gender, cast, socio-economic status.
- 3) Children weighing below average body weight for their chronological age.
- 4) Children with Grade I Malnutrition as per IAP classification.

2) EXCLUSION CRITERIA –

- 1) Children suffering from infectious, endocrinal disorders, chronic systemic illness and any other immune deficiency disorders.
- 2) Children of chromosomal, genetic, metabolic or congenital disorders.
- 3) The children of Grade II Grade III and Grade IV malnutrition as per IAP classification.

Methods-

Study design –

A prospective randomized open comparative clinical trial was carried out during the study period.

Method of sampling –

Total 60 patients of age group 5 yrs. to 12 yrs. were taken for study according to their nutritional status.

Grouping of patients –

The selected 60 patients having underweight were randomly allotted in two groups.

Group A –

30 patients of this group were given trial drug Balaghrita with normal regular diet for 60 days.

Group B –

30 patients of this group were given trial drug Ashwagandhaghrita with normal regular diet for 60 days.

Dose and duration –

Common dose of ghrita in adults according to Sharangdhara Samhita (Madhyamakhand) is one pal (48gms) dose of ghrita in children was calculated according to dilling formula as shown below

Follow up –

Patients were followed after every 15 days during treatment.

ASSESSMENT CRITERIA-

Assessment of Balkarshya (underweight) children was based on subjective and objective parameter before and after treatment.

PARAMETERS

SUBJECTIVE PARAMETERS

- Daurbalya(activity)
- Kshudha (appetite)
- DhamaniJalaDarshana
- SthulaParva
- Nidra
- Constipation
- Appearance

KapolaGataVasa(Buccal pad of fat)

Daurbalya (Activity)

Kshudha (Appetite).

DhamaniJalDarshana

SthulaParva

Nidra

Constipation

Appearance

KapolaGata Vasa (Buccal pad of fat)

OBJECTIVE PARAMETERS:

- Weight in Kg
- Height in cm
- Chest Circumference in cm
- Mid Arm circumference in cm
- Abdominal circumference in cm
- Body Mass Index

Observation and Result-

- Effect of therapy according to relief in Symptoms' score
- Relieved score and %relief in Symptoms' score in Group A

Average Relief % in Patients' and Symptoms' score

Shows Average Relief % in Patients' and Symptoms' score Group B

Sr. No.	Symptoms (Group B)	B.T.	A.T.	Relieved	% Relief
1	Daurbalya	71	18	53	74.64
2	Kshudha	79	14	65	82.27
3	Dhmani darshana	54	25	29	53.70
4	Sthula parva	56	31	25	44.64
5	Nidra	72	13	59	81.94
6	Constipation	72	12	60	83.33
7	Appearance	76	11	65	85.52
8	Kapolgat vasa	55	15	40	72.72
9	Average Relief (A)				72.35 %

- Overall average relief in Symptoms' score in Group A is 46.25% and in Group is 72.35%.

Average Relief % in Patients' and Symptoms' score

- Shows Average Relief % in Patients' and Symptoms' score

Sr. No.	Group	Avg. Patient Score (%)	Avg. Symptom score (%)
1	Group A	74.07	72.35
2	Group B	49.29	46.25

Shows average increase in objective parameters Group A and Group B

Sr. No.	Parameter	Average Increase	
		Group A	Group B
1	Weight	0.7	1.0
2	Height	1.0	1.1
3	Chest circumference	0.7	0.7
4	Abdomen circumference	0.3	0.3
5	Mid arm circumference	0.18	0.21
6	BMI	0.35	0.54

Sr. No.	Symptoms (Group A)	B.T.	A.T.	Relieved	% Relief
1	Daurbalya	71	32	39	54.93
2	Kshudha	79	26	53	67.08
3	Dhmani darshana	56	43	13	23.21
4	Sthula parva	56	43	13	23.21
5	Nidra	74	23	51	68.91
6	Constipation	72	33	39	54.16
7	Appearance	76	34	42	55.26
8	Kapolgat vasa	56	43	13	23.21
9	Average Relief (A)				46.25 %

Discussion

Discussion made on the basis of observation and results obtained. Bala ghrita and Ashwagandha Ghrita improve Daurbalya, Kshudha, Dhamani jala darshana, Sthula parva, Constipation, Appearance and Kapola gata vasa in Balkarshya. But comparatively Ashwagandha Ghrita is more effective than Bala Ghrita to improve Daurbalya, Kshudha, Dhamani jala darshana, Sthula parva, Constipation, Appearance and Kapola gata vasa in Balkarshya.

- There is no difference between efficacy of Ashwagandha Ghrita and Bala Ghrita to improve Nidra in Balkarshya. A little difference was observed between mean differences of Group A and Group B in above said symptom, but this difference is not statistically significant because it is not greater than expected by chance.
- Bala ghrita and Ashwagandha Ghrita increase Weight parameter in Balkarshya. But comparatively Ashwagandha Ghrita is more effective than Bala Ghrita to increase Weight parameter in Balkarshya. There is no difference between efficacy of Ashwagandha Ghrita and Bala Ghrita to improve Height, Chest circumference, Abdomen circumference and mid arm circumference parameters in Balkarshya.
- A little difference was observed between mean differences of Group A and Group B in above said parameters, but this difference is not statistically significant because it is not greater than expected by chance. Changes in objective parameter like height, chest circumference, mid circumference and abdominal circumference are physiologically increased in 5-12 year age groups and also within 2 months minor changes may be found on both groups. In this disease, main defect is in previous Srotas and Agni before Mamsa Dhatu proper, Bala ghrita and Ashwagandha Ghrita after giving, pacify the Vata and maintain Agni in its proper function and clear the channels and helps in proper nourishment of Dhatus by its Brimhana property.

- **Mode of action of drug –**
- Probable mode action of Balghrita –
In present study Balaghrita having a property of Madhur Rasa and Madhur Vipaka which is Vata and Pitta shamaka. Vatashaman by Snigdha, Madhur properties and Pittashamak by Sheeta and Madhur properties hence it is used in disease by Vata and Pitta. The strotoshodhaka property of drug helps in clearance of channels and improves the circulation of dhatu and indirectly helps in nourishment of dhatu means responsible for uttarotar dhatu poshana. All properties by pacifying Vata restore the displaced Kapha and pitta at their original seats and control gained over Vata which leads to vighatana of samprapti ghataka of Balkarshya.
- Vatanulomaka property of drug helps in balance and maintenance of Agni and ultimately causes samyaka aharpaka. On other hand Guru, Snigdha and pichchila gunas are directly responsible for Brumhan effect in body. It improves general health and immunity. It maintains equilibrium of Dosha Dhatu and Malas. Both Balaghrita and anupan milk add for administration to the children suffering from Balkarshya. Hence Brumhan effect of Balaghrita is effective in Balkarshya diseases.
- Probable mode action of Ashwagandha Ghrita –
In present study Ashwagandha Ghrita having property of Madhur, Kashay and Tikta Rasa, Madhur Vipaka and Ushana Veerya. Vatashaman by Snigdha, Madhur properties and Kaphashamak by Laghu, Kashay and Tikta Rasa properties hence it is used in disease in Kaphavatashamak. The strotoshodhaka property of drug helps in clearance of channels and improves the circulation of dhatus and indirectly helps in nourishment of dhatus means responsible for uttarotar dhatu poshana. All properties by pacifying Vata restore the displaced Kapha and pitta at their original seats and control gained over Vata which leads to vighatana of samprapti ghataka of Balkarshya. It helps in

balance and maintenance of Agni and ultimately causes samyaka aharpaka.

- On other hand Laghu, Snigdha gunas are directly responsible for Brumhan effect in body. It improves general health and immunity. It maintains equilibrium of Dosha, Dhatu and Malas. Both Ashwagandha ghrita and anupan milk add for administration to the children suffering from Balkarshya. Hence Brumhan effect of Ashwagandha ghrita is effective in Balkarshya diseases.
- According to Symptoms' score
- Effect of therapy according to Symptoms' score

Conclusion –

Includes end results of all the study which tends to fulfill all Aims & Objectives in various views and angles which states the total output of the study. In this study growth is accelerated which resulted in the improvement of weight and various minor changes anthropometrical measurements. These observations are in conformity with the Brumhana process described in the Ayurvedic Samhitas. Finally concluded both Bala ghrita and Ashwagandha ghrita are effective in increasing weight of the children in Balkarshya. But comparatively Ashwagandha ghrita is more significant in increasing weight of children than Bala ghrita in Balkarshya.

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