



‘EVALUATE THE EFFICACY OF ASHWAGANDHA TAIL ABHYANG IN THE MANAGEMENT OF KARSHYA’

Author name-dr.sheelal bansode ,assistant professor swasthaavritta & yoga department at naiminath ayurvedic medical college and hospital agra

Address-R.no04 naiminath campus nh-19 nawalpur,etmadpur ayurvedic medical college agra,283202

Abstract-

According to modern science Karshya can be correlated with under nutrition. According to WHO adolescent constitute 20% of global population and near about 22% of Indian population Nutritional deficiency and iron deficiency anemia are very common and has a negative effect on their growth and development. In modern era false habit of taking food without the urge of hunger, fast food, junk food growing rapidly in Indian culture. Late night sleep is the major reason to worsen mental and social health of young generation. These faulty habit leads to Mandagni which directly affects digestion. According to Sushruta due to the diet and various procedures including both physical and mental which pacifies Vata Dosha causes improper formation of Rasadhatu (either in less amount or with default) causing improper formation of succeeding Dhatu resulting in Karshya. So role of Abhyanga and diet modification plays important role in the management of Karshya. Ayurveda has its uniqueness in the prevention of any disease. For it in the classics daily regimen has been mentioned (Dinacharya Upakrama). Abhyanga (Ayurvedic oil massage) described in the ancient science and practiced all over the globe in various form has both preventive and curative effect and found beneficial in many diseases. So the topic taken to study the efficacy of Ashwagandha Tail Abhyanga in the management of Karshya.

Key words- karshya,abhyang ,ashwagandha tail

INTRODUCTION:

Ayurveda Amrutanam.Ayurveda is as equal as Amrit. In this ancient science of medicine there is solution to all health problems. In this modern era one of the leading problems India is facing is malnutrition. In every age group it is common. In Ayurveda it comes under the term Karshya.In Bruhatrayi Karshya is explained in detail. Karshya in childhood has long term effect on health if not treated in time may lead to slow behavior development or even mental retardation.

The WHO says that malnutrition is the largest contributor to child mortality globally. One of the major reasons in childhood malnutrition is the malnourished parents. So to prevent malnutrition in every age group is very essential in order to break the cycle of malnourishment. In modern science we can correlates *Karshya* with under nutrition. Malnutrition is the term broadly used for it though the literally meaning of malnutrition is bad nutrition which includes both over nutrition i.e. obesity and under nutrition. Pathophysiology of it suggests that gastrointestinal assimilation of dietary intake is insufficient to meet normal energy expenditure and the expenditure of body energy store is greater than the energy consumed³. Metabolism of energy supplies is impaired by intrinsic disease process.

Prevalence:-In adolescent population who contribute near about 20% of global population and approximately 22% of Indian population under nutrition remains a major problem⁴. About 8.1 million children in INDIA suffer from severe acute malnutrition (SAM). It is responsible for 0.6 millions death annually⁶. According to NFHS-3 more than half (54%) death of children under the age of five are related to malnutrition.

Need of present study-India efforts to handle the challenge of malnutrition among children was distributing supplementary food under the ICDS programmes through Anganawadi. Ready to use therapeutic foods, counseling to mother in ANC and PNC period, Breastfeeding and complementary feeding advice, immunizations and micronutrient

supplementation and hospital based management of the child with severe malnutrition. But due to oral intolerance found in malnourished children response to treatment is limited. So present study is about to find a new simple way that can be easily introduced in a adolescent and younger generation to treat their *Karshya* so that in future they can produce healthy siblings to break the cycle of malnutrition.

The present study is about *Abhyanga* (Ayurveda oil massage) and its role in the management of *Karshya* (under nutrition). *Abhyanga* to whole body is one of the *Dinacharya Upakrama* (daily regimen). In *Kaidev Nighantu* an interesting fact had been mentioned that *Abhyanga* by *Tail* is eight times more beneficial than *Ghrta* if used as external application for increasing the strength of person⁷. In *Karshya* predominant *Dosha* is *Vata Dosha* and for treatment of *Vata Dosha* *Tail* is best. *Ashvagandha Tail* add extra benefit as it is a growth promoting drug. Studies on *Ashvagandha* indicates that It possesses anti inflammatory, anti tumor, Antistress, antioxidant, immunomodulatory properties⁸. The use of *Withania Somnifera* as a general health tonic and in prevention of diseases may be partially related to its effect on the immune system. So the topic undertaken is

AIM AND OBJECTIVES

AIM - Study the efficacy of *Ashvagandha Tail Abhyang* in the management of *Karshya*.

OBJECTIVES:

- 1) To study concept of *Karshya* in Ayurvedic literature.
- 2) To study the malnutrition as per modern medicine.
- 3) To study the role of *Abhyang* in *Karshya*.
- 4) To study the importance of diet modification in the management of *Karshya*.

HYPOTHESIS-

Alternative hypothesis: There is definite role of *Ashvagandha Tail Abhyang* in the management of *Karshya*.

Null hypothesis: There is no role of *Ashvagandha Tail Abhyang* in the management of *Karshya*.

STUDY DESIGN:

Type of study: Prospective open labeled randomized controlled study.

Materials and method:

- 1) **Source Of Data** (Literary sources) all classical and modern literature and contemporary texts including the journals and website about the disease drug will be reviewed and documented for the study.
- 2) **Drug manufacturing:** Method of preparation and formulation of drug will be taken from *Sharangdher Samhita*.
- 3) **Analytical study:** Authentication And Standardization of drug material will be done

CLINICAL STUDY:

A. Sample source: 60 patients will be randomly selected for the study from *swasthyvritta* OPD of Naminath Ayurvedic research and hospital Kuberpur Agra .Patients will be divided in two groups A & B.

B. Selection:**Inclusion Criteria-**

- 1) Age group 05 to 30 years irrespective of sex, religion, socio-economic status and food habits.
- 2) Classical signs and symptoms of *Karshya* like *Dorbalya*, *Kshudhasahatva*, *Trushnasahatva*, *Nidrakshay*, *Shushksphik*, *Sirajala*, *Sthulparva* etc. as per *Astang Sangrah*.
- 3) BMI below 18.5kg/meter square.

Exclusion criteria-

- 1 Patients below 05 year and above 30 years.
- 2 Patients who are having infectitious diseases like Tuberculosis, congenital and hereditary problems, Malignancies, Malabsorption Syndromes and Metabolic disorders.
- 3 Any other systemic illness.
- 4 Pregnant and lactating mother.

C) Withdrawal criteria: Patients having any reaction from trial drug will be withdrawn from the study.

D) Consent- A well informed written consent of all patients including in my study will be obtained before starting the treatment

E) L.A.M.A- Those patients who leave the treatment before advised duration or who do not follow instruction about the study will be considered as left against medical advice (L.A.M.A)

F) Investigation

Patient will ask for following investigation-

- 1) CBC and ESR
 - 2) Serum Albumin..
 - 3) Other laboratory investigations will be carried out if necessary.

Grouping and Randomization of patients:

As per lottery method of randomization, 60 patients were selected randomly and divided in two groups.

Group-A -Trial group

Patients of these groups will be treated with *Ashvagandha Tail Abhyang* + routine diet according to requirement will be given.

Group-B- Control group

Patients of this groups will be treated with pathya apathy routine diet according to requirement will be given.

Mode of administration: *Abhyang* as external application.

Time: Once a day in early morning for 30-40min. (900 *Matra* -Dalhan)

Dietary Restriction-The patient will allow taking his/her normal routine diet.

17) PATHYAPATHYA-

DO (<i>PATHYA</i>)	DONTS (<i>APATHYA</i>)
Milk	Bakery products like Bread,Biscuit
Curd	Dry food product like Chiwada,Farasan
Ghee	Tea
Green leafy vegetables	Coffee
Seasonal fruits	Tobacco, Alcohol
Drink lukewarm Water	Cold or refrigerated water
Avoid to take meal without urge of Hunger	Excessive exercise
Sleep early	Exertion
Eggs, meat, fish	Sleeping late at Night.

Duration of Study-2 months (60days)

Follow up study: Follow up study will be carried out on 15th day,30th day,45th day,60th day.

Assessment criteria:

- **Subjective parameter**

- 1) *Dorbalya*
- 2) *Pipasasahatva*.
- 3) *Kshudhasahatva*.
- 4) *Nidrakshaya*.

- **Objective parameters**

- 1) BMI
- 2) Height
- 3) Weight
- 4) Mid arm circumference
- 5) Waist circumference and hip west ratio.

1)Dorbalya

SYMPTOMS	SCORE
No weakness	0
Occasionally feeling weakness without Routine work and remains for some time.	1
Weakness without tiredness daily for Sometime	2
Weakness without tiredness daily for Long duration.	3
Always feel weakness.	4

2) Pipasasahatva

Symptoms	Score
Can tolerate thirst for more than 3 hrs	0
Can tolerate thirst for maximum 3 hrs.	1
Can tolerate thirst for maximum 1 hrs	2
Can tolerate thirst for more than 30 min	3
Can tolerate thirst for more than 15 min	4

3)Kshudhasahatva

Symtoms	Score
As usual /routine.	0
Slightly increased.1 meal extra with routine diet	1
Moderately increased.2 meal extra with routine diet	2
Markebaly increased.3 meal extra with routine diet	3
Severe increased.4 meal extra with routine diet	4
Symtoms	Score
Normal sleep	0
Sleep not more than 8 hrs	1
Sleep not more than 7 hrs	2
Sleep not more than 6 hrs	3
Sleep not more than 5 hrs	4

4)Nidrakshay

Objective criteria

Height: Height is measured in centimeter by stature meter mounted on wall and fixed at 200 cm from the base of floor. Patients ask to stand in front of wall with their feet touching the wall. Height is measure before the treatment and after the treatment.

Weight: Weight is measured in kg by using calibrated weight machine. Zero error was checked every time and removed every time if present. Weight is taken before and after the completion of treatment.

BMI (BODY MASS INDEX): It is calculated by standard formula which is weight in kg divided by the height in meter square. BMI is a simple index of weight for height which is commonly used to classify underweight, overweight and obesity and leanness.

WHO Classification of adults underweight according to BMI

	BMI
Underweight	<18.50
Severe thinness	< 16
Moderate thinness	16.00 -16.99
Mild thinness	17.00 -18.49
Normal Range	18.50 -24.99

BMI values are age independent and same for both the sexes. (www.apps.who.int/bmi/index).

MUAC (Mid upper arm circumference): It is the circumference of left upper arm. It is measured in centimeter at midpoint of left hand at the midpoint between the tip of shoulder and tip of the elbow by using measuring tape. It is useful for nutritional assessment. Generally it is recommended in age between one to five year however increasingly being used to assess adult under nutrition. (www.unsystem.org)

WAIST/ HIP RATIO: It is measured by waist circumference divided by waist circumference. There is increase risk of metabolic complication for men with a waist circumference >102 cm in men and >88 cm in women. W/H ratio > 1.0 in men and > 0.85 in women indicates abdominal fat accumulation. Wasting is found in under nutrition at gluteal region.

➤ Observations and Results-

After the completion of clinical trial observation and result were noted and recorded. The data obtained from the clinical study was assessed as follow

B) Demographic Analysis

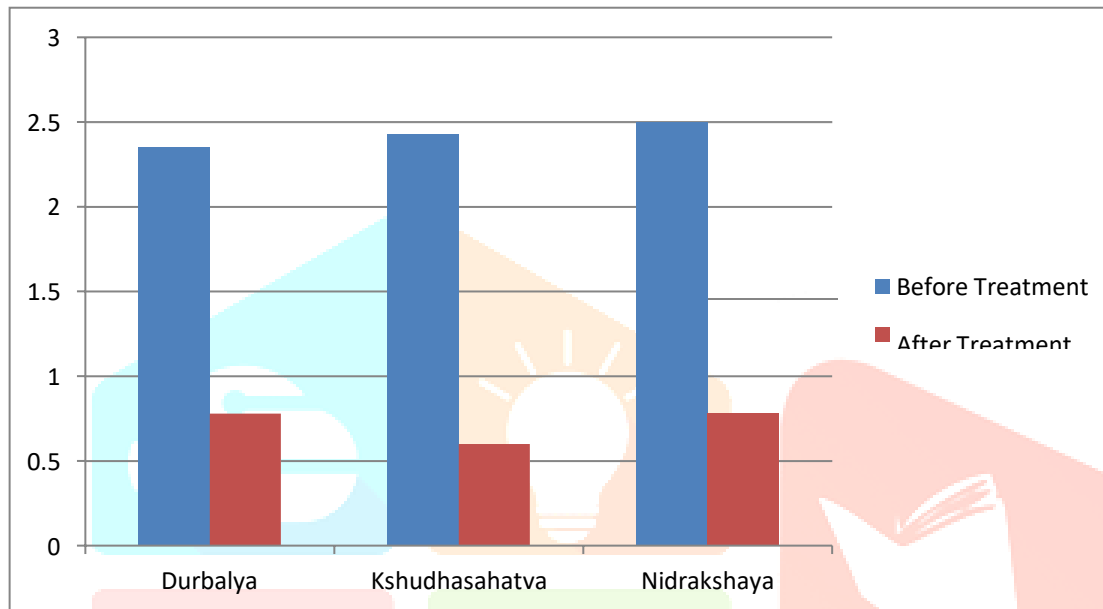
1. General history
2. Dashvidha Parikshana.

B) Statistical Analysis

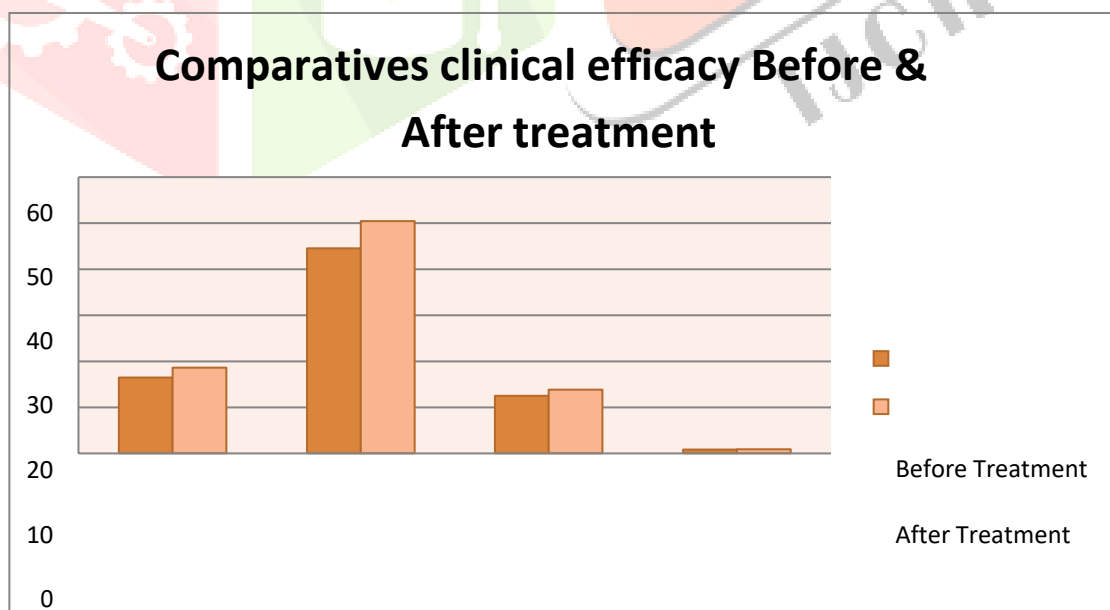
This was done to compare the effect of Ashwagandha Tail *Abhyanga* and pathyaapathya (diet modification) with only the *pathyaapathya*.

1. Effect of therapy on subjective and objective criteria.
2. Total effect of therapy.

Observations and Results of the study are as follow



Graph 1–Before and After Treatment Symptom of Subjective Parameter



Graph 2 –Before and After Treatment Changes on Objective Parameter

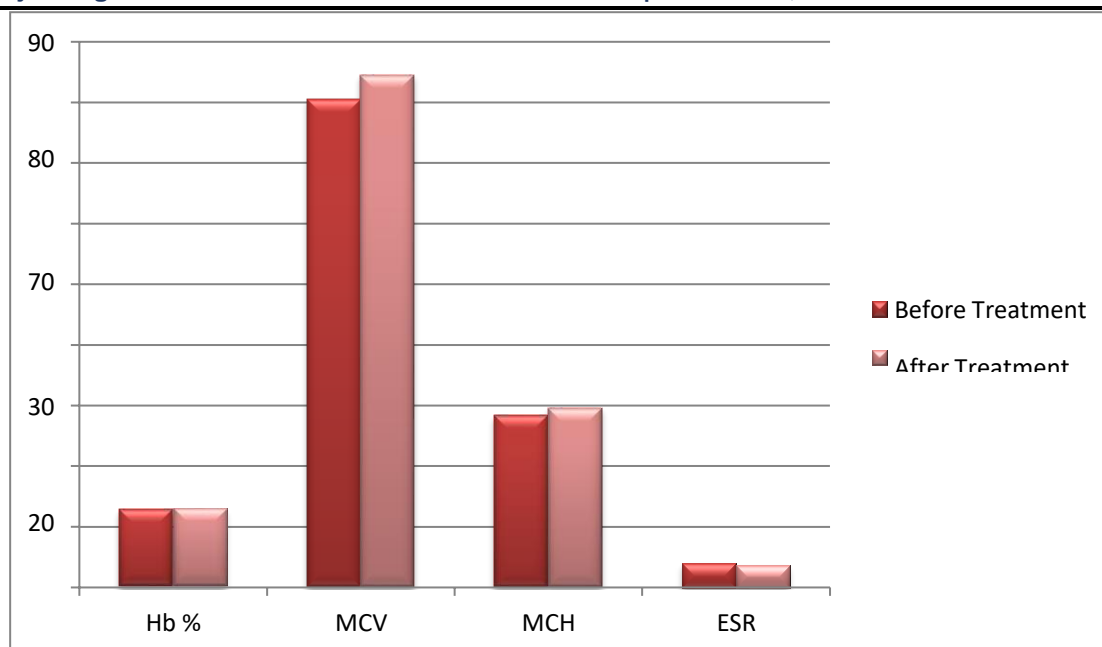
Table : Master Chart of *Karshya* Patients

S. No	Sign & Symptoms	Mean		Mean Difference	S.D.		S. E.	T value	P Value	Remark
		BT	AT		BT	AT				
1	<i>Durbalya</i>	2.35	0.78	1.58	0.70	0.73	0.16	9.82	0.0001	HS
2	<i>Kshudhasahatva</i>	2.43	0.60	1.82	0.64	0.59	0.13	13.29	0.0001	HS
3	<i>Nidrakshaya</i>	2.50	0.78	1.73	0.64	0.70	0.15	11.52	0.0001	HS
4	B.M.I	16.4040	18.5708	-2.1667	1.1115	1.2390	0.263	8.23	0.0001	HS
5	Weight	44.50	50.44	-5.9430	4.00	5.54	1.081	5.49	0.0001	HS
6	Mid arm circumference	12.46	13.79	-1.32	0.44	0.97	0.16	7.87	0.0001	HS
7	Waist circumference and hip waist ratio	0.77	0.85	-0.08	0.04	0.05	0.011	7.73	0.0001	HS
8	Hb %	12.18	12.94	-0.75	1.39	0.98	0.27	2.80	0.0063	S
9	MCV	80.60	84.55	-3.95	4.56	3.56	0.915	4.31	0.0001	HS
10	MCH	28.33	29.60	-1.28	2.28	1.72	0.45	2.82	0.0060	S
11	ESR	4.00	3.68	0.33	1.77	1.49	0.36	0.88	0.3771	NS

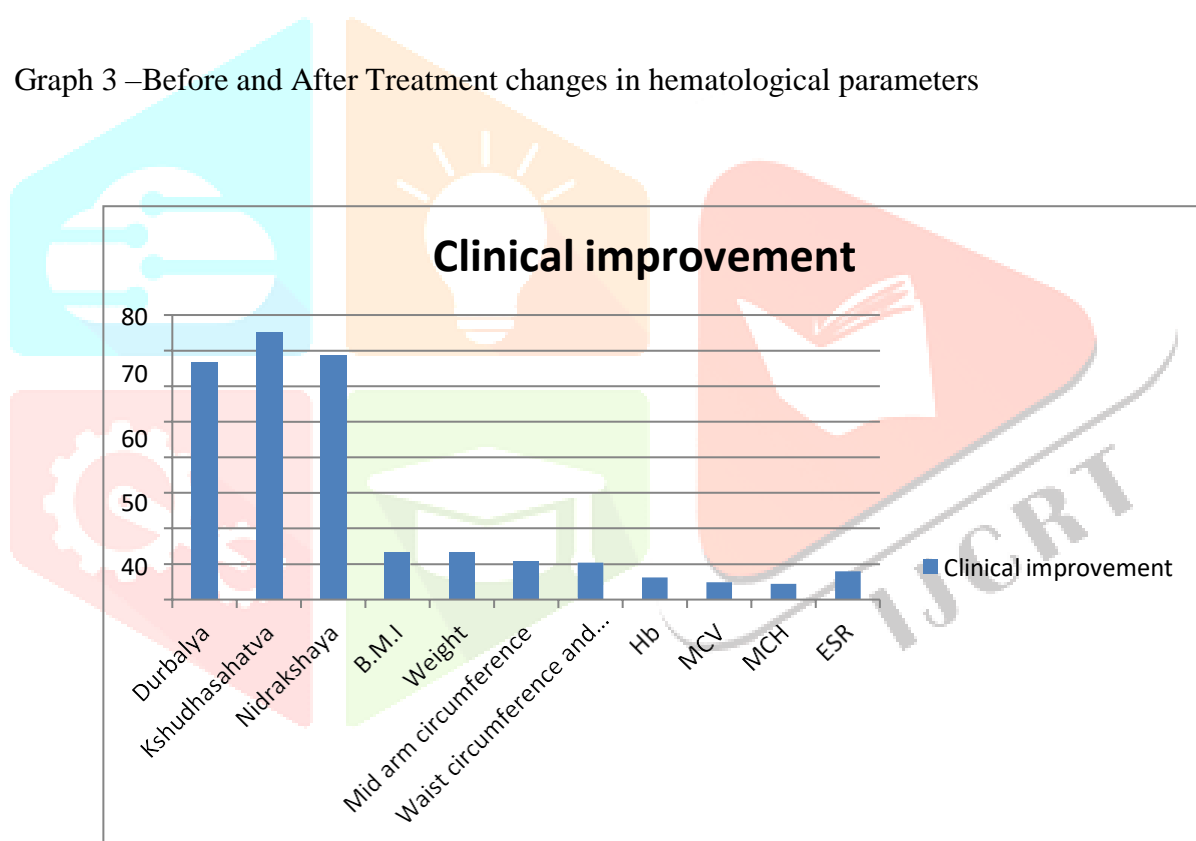
Before & After Treatment Symptom of Subjective Parameter

In this study symptoms like – *Durbalya*, *Kshudhasahatva*, *Nidrakshaya* were found improved after treatment compared before treatment and reached up to statistically significant level..

Before and After Treatment Changes on Objective Parameter-In this study B.M.I, Body weight, Mid arm circumference and waist circumference and hip waist ratio were found improved after treatment compared with before treatment and reached up to statistically significant level



Graph 3 –Before and After Treatment changes in hematological parameters



Graph 4-Clinical Improvement

In this study Hematological parameter like Hb%, MCV, MCH, ESR were observed. Among them found Hb%, MCV, MCH found significant improvement after treatment compared with before treatment.

Table -Comparatives Clinical Improvement After Treatment

Sl. No	Observed parameters	Improvement (%)
1	<i>Durbalya</i>	66.8%
2	<i>Kshudhasahatva</i>	75.3%
3	<i>Nidrakshaya</i>	68.8%
4	B.M.I	13.23%
5	Weight	13.35%
6	Mid arm circumference	10.67%
7	Waist circumference and hip waist ratio	10.39%
8	Hb %	06.23%
9	MCV	04.90%
10	MCH	04.48%
11	ESR	08%

Overall clinical improvement of the study:

CLINICAL IMPROVEMENT	Percentage (%)
	19.65%

RESULTS-For this Clinical Trial, Total 40 patients of *karshya* were selected for Abhyanga with *Ashwagandha tail*. The study shows that incidence of *Karshya* was more common in males (55 %), in age group of 05-30 years, and Hindu religion (92.50%), Lower class (85%), Vegetarian diet pattern (77.5%), *Mandagni* persons (62.5%), *Vata pittaj Prakriti* (50%). Patients were also relief from sign & symptoms *Durbalya*, *Kshudhasahatva*, *Nidrakshaya*, weight loss etc. However, the study shows clinician efficacy of *Ashwagandha tail Abhyanga* in

Karshya patients is -19.65 % over all observed parameters.

DISCUSSION

Karshya a word generally used to describe an individual with lean and thin personality or appearance. As thin and lean individuals are more prone to susceptible and infectious diseases it is a prime concern to treat them and make them healthy. According to modern science *Karshya* can be correlated with under nutrition. It always remains global problem. Up to the date many efforts had been done to tackle the problem of malnutrition most of them are related to the internal medicine in the form of ready to use therapeutic food, protein supplement, *Ashwagandha Grit*, *Ashwagandha Granules*⁷², social awareness and much more. But the situation remains same till date malnutrition becomes a huge problem for India. One of the reasons behind not getting success is the intolerance of food in malnourished children. Present study is about the external application of *Ayurvedic* oil massage to find a new way to tackle the situation of oral intolerance.

According to *Sushruta Bhrajaka Pitta*⁷⁷ located in the skin absorbs the medication administered through skin in the form of *Abhyanga*, *Parisheka* etc. In this way it is possible to bypass the stomach digestion and oral intolerance. Drug administered through *Abhyanga* get absorbed in skin and metabolized

by it and comes into the circulation and act accordingly. By the process of *Abhyanga Dhatvagni* get increases as a *Sneha* has a property to improve quickly the wasted *Dhatu* and give strength to *Agni*⁷⁸. *Ushma* produced by *Abhyanga* has similarity of *Ushna guna* of *Agni*. Improvement in *Dhatvagni* improves *Jatharagni* as both are interdependent. So from above it can be understood that *Abhyanga* is a path to reach *Agni* via *Dhatvagni*. So *Ashwagandha Tail Abhyanga* is a beneficial in the management of *Karshya*. In *Krishna* person, due to vitiation of *Vata Dosha Strotasa* get constricted which affect the *Rasavahana* so it interfere the nourishment of *Dhatu*. *Tail* possesses property of *Sukshma* and *Vyavayi Guna*. These property help *Tail* to reach in constricted *Strotasa* and provide nourishment to them. This helps to improve *Rasavahana* in *Dhatu*.⁷⁵ It helps in the nourishment of *Mamsa*, *Meda* and succeeding *Dhatus*. Thus it is useful in weight gain.

Research on massage suggests that it probably increases the secretion of human growth hormone (HGH)⁸⁰. Growth hormone is believed to speed up the movement of digested protein out of the blood and into the cells which accelerate cell anabolisms i.e. build up of amino acid to form tissue proteins. Hence this promotes normal growth. Massage creates a general feeling of well being which causes physical release of endorphins via nervous system. Massage is promising therapy in reducing stress function.⁸³ Research on massage therapy suggest its role in weight gain. Study indicates that massage with essential oil make lipid absorption through skin. Oil act as a source of heat and nutrition. Skin absorb the fat easily which lead to higher calorie intake and hence promote weight gain. Studies on *Ashwagandha* indicates that it possesses, Anti inflammatory, Antistress, Antioxidant, Immunomodulatory, Antibacterial, Antiviral, Sedative properties⁹³.

Ashwagandha traditionally used as a *Rasayana* herb. Charaka has included it under *Balya*, *Brihaniya* and *Madhura Skandha*. As in *Karshya Brihana* therapy is the main treatment and *Ashwagandha* has the properties of *Brihana*. So it is found beneficial in the treatment of *Karshya*. *Ashwagandha* has positive influence on endocrine, cardiopulmonary and CNS. Amino acids present in *Ashwagandha*. *Ashwagandha* had natural alkaloids and steroids which are beneficial to improve body mass. It helps to normalize sleep. It helps your body to fulfill essential amino acid demand. From all above mentioned data it can be concluded that *Ashwagandha* has a potential to cure illness which are the underlying cause of *Karshya*.

CONCLUSION

1. Etiological factor found during the study are *Alpashan* (Eating in less quantity), *Pramitashana*, *Kriyaatiyoga* (overexertion), *Rukshaannapana* (Bakery products, Chivada, Farasana), *Shoka* (Stress), *Vegaavarodh*, disturbed sleep in the pathogenesis of *Karshya*.
2. According to Modern science inadequate energy intake, protein intake, Vitamin deficiency, micronutrient deficiencies, are the etiological factors.
3. In *Daurbalya*, *Pipasasahatva*, *Kshudhamandya*, *Pipasasahatva*, *Nidrakshaya*, *Weight*, *BMI*, *MUAC*, *SFC* significant result were observed.
4. Modification of Diet plays important role in the management of *Karshya*.
5. *Ashwagandha Tail Abhyanga* as a supportive therapy under the age of five for the management of malnutrition can be suggested as it has no side effect and can be easily done at home.
6. *Ashwagandha Tail Abhyanga* therapy as single therapy has some limitation to cure under nutrition
7. in a complete manner. Black box design with complete approach of Ayurvedic treatment is needed which includes external procedure like *Abhyanga*, *Brihana Therapy*, *Brihana Basti* and *Pathya Apathya*.

Reference-

1. Charaka Samhita of Agnivesha ,edited by Dr. Bramhanand Trpathi with Charaka Chndrika, Hindi commentary, Chaukhamba Sanskrit Prakashana, Varnasi vol I & vol II.,reprint 2004.
2. Charaka Samhita of Agnivesha with English translation edited by Prof.Priyavat Sharma, Chaukhamba Orientalia,Varanasi,1st edition 1981.
3. SushrutaSamhita of Maharshi Sushruta,edited with Ayurveda Tatva-Sandipika,Hindi commentary ,by Kaviraj Ambikadutta Shastri ,Chaukhamba Sankrit Prakashana,Varanasi, vol I & vol II.,reprint 2010.
4. ASHTANG SANGRAHA - Edited by Kaviraj Atridev Gupta, Krushnadas Acadamy, Varanasi.Chaukhamba press Edition 2002.
5. ASHTANG HRIDAY – Ashtang Hridayam, of Shrimad Vagbhata, edited by Dr. Ganesh Krshna Garde, Chaukhamba Sanskrit Prakashana, Varanasi reprint 2014.
6. ASHTANGA SAMGRAHA- of Vagbhata,English translation,Translated by Prof.K.R.Shrikantha Murthy ,Chaukhamba Orientalia,Varanasi,2nd edition 1998.
7. MADHAV NIDAN- of Madhvakara, with the „Madhukosha“ Comentary of Shri Vijayarakshit & Shrikantadutta, with Vidyotini Hindi Commentary by shri Sudarshana Shastri, Chaukhamba Sanskrit sansthan ,18 th edition,1989
8. BHAVAPRAKASH SAMHITA – Sarth Bhavaprakash by Ayurvedacharya , Purushottam GaneshNanal, Rajesh Prakashan, Reprint 2007
9. YOGARATNAKAR – Yog Ratnakar with Vidyotini,Hindi commentry by Vaidya Shri Laxmipati Shastri, edited by Bhisagratna Bhrahmasankar Shastri, Chaukhamba Sanskrit Prakashana,Varanasi, edition 5th1993.
10. BHAISHAJYA RATNAWALI- Bhaishajya Ratnawali of Shri Govindadas Sen edited with Chandraprabha Commentary by Jaideva written by Pandit Lalchandji Vaidya. Reprint 2012.
11. NIGHANTU: Kaidev Nighantu, Edited by Acharya Priyavata Sharma. Chaukhamba Orientalia, first ed. 1976.
12. Bhavprakash Nighantu, by Dr.Gangasahay Pandey,Dr Krishnachandra chunekar, Chaukhamba Bharati Acadamy,Varanasi,Patna, edition 9th 1993.
13. Abhinav Bhaishajya Kalpana Vidhyana by Acharya Siddhinandan Mishra, Chaukhamba Surabharati Prakashan, Varanasi,reprint 2012
14. Ayurvediya Panchakarma Vidyana by Vaidya H.S Kasture. Baidyanath Publication.6 th edition.
15. Database on Medicinal Plants used in Ayurveda by P.C. Sharma, M.B. Yelne, T. J. Dennis, publication and information directorate, CCRAS ,New Delhi,vol 3, 2001
16. Indian Materia Medica, Nadkarni, 3rd ed. 1954.
17. Text Book of Swastavritta by Dr. Vijay Pathrikar 5th Ed. April 2014.
18. API Text Book Of Medicine, Siddharth Shaha, 8th reprint 2009
19. A Textbook of Medical Physiology, Guyton
20. Harrison"s principles of Internal Medicine 15th Ed.
21. IAP Textbook of pediatrics, A Parthasarthy, 3 RD edition 2006.
22. Essential Paedriatics 7th by O.P.Ghai, edition reprint 2010.
23. Preventive and social Medicine. K Park.22th edition.