

REVIEW ON MALNUTRITION HEALTH HAZARDS IN PEDIATRIC POPULATION AND ITS AYURVEDA MANAGEMENT

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ABSTRACT

Objectives: The study was designed with the objectives: To study the role of *Brimhana* therapy in *Karshya* and to review the clinical research works on *Karshya* (malnutrition) in the Institute for Post Graduate Teaching and Research in Ayurveda (IPGT and RA), Jamnagar, and reach a final conclusion.

Methods: This study was done by compiling the classical Ayurvedic literature, pediatric magazines, and research journals as well as PubMed and MedLine database for the search of the relevant literature. The review has been done from previous years of clinical research work in IPGT and RA, Jamnagar.

Discussion: *Brimhana* and *Vrushya* Yoga have resulted in obtaining the phenomena of ideal anabolism. *Brimhana* Yoga has *Kapikachhu*, *Shweta musli*, and *Shatavari* are *Brimhana* and *Vrushya* both properties in it, that's why it shows a better result. *Basti* is better in *Vatahara Guna* and fruitful in microcirculation that is why it produces a better result.

Conclusion: In the present study, it has been concluded that *Brimhana* is the line of treatment in *Karshya* (malnutrition) and gives a fruitful result. *Ayurvedic* medication and procedures are very efficacious to overcome this malnutrition named, a great burden on society. Assimilation has also a very big role for the absorption of *Brimhana* Yoga, and for this, regulation of *Agni* is very important. *Basti* procedure is more efficacious than drug administration. Overall *Ayurveda* is very efficacious in *Karshya*.

Keywords: *Karshya*, *Shatavari*, *Kapichchu*, *Ayurvedic*, *Basti*.

INTRODUCTION

Many diseases are known to afflict human being, and these include infectious, genetic, and nutritional deficiency disorder. Of these, the nutritional disease is by far the most common throughout the world, and among them, malnutrition is the most common one. The term malnutrition refers to both undernutrition and overnutrition. Undernutrition is a condition in which there is inadequate consumption, poor absorption, or excessive loss of nutrients. It is a condition where the child does not get the required nutrition for normal growth that is directly related to low-calorie intake.* India is home to 40% of the world's malnourished children and 35% of the developing world's low-birth-weight infants. Every year 2.5 million children die in India, accounting for one in five deaths in the world [1]. India is one of the countries with the highest proportion of malnourished children in the world, along with Bangladesh, Ethiopia, and Nepal. India's rates are almost double those of Sub-Saharan Africa and 5 times higher than those of China [2]. Malnutrition in India, as in other developing countries, results from a series of interrelated factors rooted in poverty, including lack of access to food, health care, safe water, sanitation services, and appropriate child feeding and caring practices. Malnutrition in young children is conventionally determined through measurement of height, weight, mid-arm circumference and skinfold thickness (subcutaneous fat) in reference to age.

What Ayurveda says?

Ayurveda science of life, has always emphasized to maintain the health and prevent the diseases by following proper diet and lifestyle instated of treatment and cure of the diseases. The basic is *Swasthyashya Swasthya Rakshanam*, which means to maintain the health of the healthy, rather than *Aturashya Vikara Prashamanancha*, means to cure the diseases of the diseased. One among them is the *Trayopasthambha* (three pillars of life), i.e., *Ahara* (diet), *Nidra* (sleep), and *Brahmacharya* (celibacy), executing an important role in maintaining the health [1].

Karshya is nutritional disorder described in Ayurveda, and it is related to undernutrition. An over lean person has *Shushka-sapphic*, *Udara*, and *Greeva* (dried up buttocks, abdomen, and neck), *Dhamanijala santataha* (prominent vascular network), *Twagasthi Shesho* (remnant of skin and bone), and *Sthoola Parva* (thick joints) [2].

What can Ayurveda do in contemporary age in malnutrition (*Karshya*)?

Chamanlal *et al.* (1987): The outcome of the research represents that the line of treatment of *Karshya* is *Laghu-Santarpana* and *Mudga* has both properties in it. *Brimhana* Yoga has *Kapichchu*, *Shwetamushalee*, and *Shatavari* are *Brimhana* and *Vrushya* both properties in it, that's why it shows a better result. *Karshya* and *Atikarshya* show all forms of malnutrition that is mild, moderate, and severe. *Karshya* being a *Vata Pradhana Vyadhi*, pharmacotherapies such as *Brimhana* [2] and *Rasayana* [3] have been advocated in the classics for its management.

According to *Acharya Charaka Suintimely* and little than the required food is prime factor producing *Karshya*. Dalhanacomments Kars hyaas "*Karshyam Mamsakshayam*". Means person having leanand thin body personality but doesn't have any other complaints is *Karshya*. *Karshya* isequal to underweight to some extent. *Karshya* and *Atikarshya* shows to forms of Malnutrition that is mild moderate and severe respectively [3-5].

METHODS

This study was done by compiling the classical Ayurvedic literature, pediatric magazines, and research journals as well as PubMed and Medline database for the search of the relevant literature. The review has been done from previous years of clinical research work in IPGT and RA, Jamnagar. Works did at KB Department, IPGT and RA, Jamnagar:

1. Patel *et al.* (1985): *Brimhana* effect of certain Ayurvedic drug compound in underweight children.

Table 1: Total number of children enrolled in all studies

S.No	Study	Group	Completed	Discontinue	Total
1	Patel et al. (1985)	Brumhana Yoga	42	0	94
		Lajadi Yoga	52	0	
2	Chamanlal et al. (1987)	Brumhana Yoga	55	0	103
		Lajadi Yoga	48	0	
3	Nivedita et al. (1998)	Kshri-Basti using MatruStanya (breast milk) - Group 1	6	0	19
4	Kori et al. (1999)	Group 2 - (children): Aswangandha Siddha Kshri-Basti	14	1	27
		Aswagandha granules group	15	2	
5	Jatav et al. (2003)	Aswagandha Siddha kshirabasti	10	0	37
		Vidarikandadi Vati Group	20	5	
6	Joshi (2011)	Kshirabala Taila Basti Group	17	2	28
		Prinan Modak Group	10	3	
		Godhumadi Modak Group	11	3	
		Control group	7	1	
7	Sandip Lad (2015)	Prinana Modaka Group	20	1	42
		Balya Biscuit Group	22	3	

Table 2: Observation of all studies

S. No	Study	Group	Weight % of increase	Height % of increase	MAC % of increase
1	Patel et al. (1985)	Brumhana Yoga	7.27	-	5.58
		Lajadi Yoga	1.49	-	1.69
2	Chamanlal et al. (1987)	Brumhana Yoga	10.83	1.39	9.01
		Lajadi Yoga	1.57	0.14	0.81
3	Nivedita et al. (1998)	Kshri-Basti using Matru Stanya (breast milk) - Group 1	26.55		12.54
		Group 2 - (children): Aswangandha Siddha Kshri-Basti	6.41	0.33	2.91
4	Kori et al. (1999)	Aswagandha granules group	8.03	0.86	2.66
		Aswagandha Siddha kshirabasti	5.27	0.00	1.72
5	Jatav et al. (2003)	Vidarikandadi Vati Group	6.63	0.60	5.56
		Kshirabala Taila Basti Group	10.70	0.78	6.67
6	Joshi (2011)	Prinan Modak Group	5.56	0.73	8.57
		Godhumadi Modak Group	6.57	0.75	3.53
		Control group	3.40	0.32	7.74
7	Sandip Lad (2015)	Prinana Modaka Group	5.30	1.13	4.47
		Balya Biscuit Group	6.73	1.27	4.11

- Chamanlal et al. (1987): *Brimhana* (anabolic) effect of certain indigenous drug in pediatric practice (Table 1).
- Nivedita et al. (1998): A clinical study on *Brimhana* effect of *Kshirabasti* in neonates and in *Karshya* children (Table 1).
- Kori et al. (1999): A comparative study on *Brimhana* effect of *Aswagandha granules* and *Aswagandha Siddha Kshirabasti* in *Krishna* children (Table 1).
- Jatav et al. (2008): A comparative study on the effect of *Vidarikandadi Vati* and *Kshirbalataila Basti* in the management of *Karshya* in children (Table 1).
- Doshi et al. (2011): A comparative clinical study of *Brimhana* effect of *Prinanamodaka* and *Godhumadimodaka* in the management of *Karshya* in children (Table 1).
- Lad et al. (2015): clinical study on effect of *Balya Biscuit* and *Prinanamodaka* on *Krish* children (Table 1).

DISCUSSION ON PREVIOUS RESEARCH WORKS

Patel et al. (1985) - The outcome of the research represents that the treated group had shown a significant increase in various physical and anthropometric measurements. The result of the study is *Brumhana* and *Vrushya* Yoga which have resulted in obtaining the phenomena of ideal anabolism (Table 2).

Chamanlal et al. (1987) - The outcome of the research represents that the line of treatment of *Karshya* is *Laghu-Santarpana* and *Mudga* has both properties in it. *Brumhana Yoga* has *Kapichchu*, *Shwetamushalee*, and *Shatavari* are *Brumhana* and *Vrushya* both properties in it, that's why it shows a better result (Table 2).

Nivedita et al. (1998) - The outcome of the research represents that *Ashvagandha Siddha Kshirabasti* showed a better anabolic effect by the

increase musculature and deposition of fat. *Basti* is better in *Vatahara Guna* and fruitful in microcirculation that is why it produces a better result (Table 2).

Kori et al. (1999) - The outcome of the research represents that action for *Basti* sustained for a longer period even after stopping the therapy and weight continued to increase. The outcome of the research represents that *Basti* procedure shows a better result than internal medicine in *Kariya* with the same drug due to *Yogvahi Guna* of *Tailam* and *Vatahara Guna* in *Basti*. The controlled gain over *Vata* leads to the *Vighatana* of *Samprapti Ghataka* of disease *Karshya* (Table 2).

Jatav (2008) - The outcome of the research represents that *Basti* procedure shows a better result than internal medicine in *karshya* with the same drug due to *Yogvahi Guna* of *Tailam*. *Tailam* has a property of microcirculation and *Vatahara Guna* in *Basti*. The controlled gain over *Vata* leads to the *Vighatana* of *Samprapti Ghataka* of disease *Karshya* (Table 2).

Doshi (2011) - The outcome of the research represents that *Godhumadi modak* is a modified form of "Hyderabad nutrition formula" given by National Institute of Nutrition, Hyderabad. *Priyala* and *Laja* have more *Laghu Santarpanotha Guna* than Ground nut so that in *Karshya* it gives a better result (Table 2).

Sandip Lad (2015) - The outcome of the research represents that *Balya* Biscuit is better drug in the treatment of *Karshya* because it has all the needed micronutrients and macronutrients for nourishment (Table 2).

Concept of Agni in malnutrition

No study till has focused on the concept of *Agni* on malnutrition. *Brumhana* is the line of treatment in malnutrition, but with improper

