

## Panchakarma in Pediatrics: A Clinical Review

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### ABSTRACT:

*Kaumarbhritya* is one of the eight main branches of Ayurveda and deals with healthy progeny and pediatric care and management of disorders. *Shodhana Chikitsa* is one of the two prime treatment protocols explained in Ayurveda, which is popularly known as *Panchakarma* viz. **Vamana, Virechana, Basti, Nasya** and **Raktamokshana**. But the main procedures are masked away by the *Purvakarma* (varieties of *Snehana* and *Swedana*) in the name of *Panchakarma* in common. These *Panchakarma* procedures are indicated in many pediatric disorders, though they are not directly indicated. There is a long list of diseases in which the *Panchakarma* treatment modalities can be successfully carried out in the children. The newer disease entities too can be successfully treated with *Panchakarma*, once the disease pathology and entities involved such as *Dosha, Dushya* etc. are understood properly as per Ayurvedic guidelines. To understand such diseases, Acharya Charaka has given clear guidelines (*Anukta Vyadhi Vimana Sthana*, chapter 8). As children are in growing phase there are certain indication, contraindication and precautions to be taken while conducting the *Panchakarma* in children and with all these cautions and precautions there is wide scope for *Panchakarma* in pediatric practice. The details of the *Panchakarma* procedures in children along with its indication, contraindications and precautions have been furnished in the full text. This article is an attempt to increase the *Panchakarma* practices in children for better result.

**KEYWORDS:** *Kaumarbhritya, Panchakarma, Pediatrics, Shodhana Chikitsa*

### INTRODUCTION:

**An overview of *Panchakarma*:** Ayurveda an ancient and classical system of medicine emphasized on prevention and care of diseases to promote the health of individuals. Ayurveda is the first among all medical systems to identify the clinical specialties and each of these have their own literary treasure. It is the most well organized medical system from ancient times and is distributed in 8 parts i.e. *Ashtanga* Ayurveda. *Balaroga* or *Kaumarabhritya* is one among those eight. ***Kaumarabhritya*** focused on –

1. The care women and men of reproductive age to improve the quality of semen and ovum to prevent infertility and to get better progeny.
2. Care of pregnant women for good and healthy offspring's.
3. Care during labor/delivery and parturition.
4. Care of newborn babies.
5. Care of children up to 16 years of age.

The treatment of disease is explained under two main categories in Ayurveda i.e. *Shodhana* and *Shamana*. *Shodhana* is a kind of treatment which is popularly referred as *Panchakarma* [1]. *Panchakarma* includes 5 types [2] of procedures which are very systematically planned and are advocated in order to cure the disease as part of treatment or to maintain the health of healthy individual or as a pre-rejuvenative procedure [3]. There are standard protocols and sequences to be followed while administering these procedures and there are strict

contra indications too. The mal-application of the procedures too is dangerous, many a times fatal outcome too may be there.

**Vamana [4]** – giving the medicine through mouth and expulsion also from mouth.

**Virechana [5]** – giving medicine through mouth and expulsion through anal route.

**Basti [6]** – introducing the medicine through anal route and expulsion also from anal route.

**Nasya [7]** – introducing the medicine through nostrils and expulsion through nose, mouth and eyes.

**Raktamokshana [8]** – without introducing medicine removing of morbid impurities along with blood by bloodletting.

There are different sub types in each of these procedures, signs and symptoms of proper cleaning, improper cleaning, and a variety of drugs too are used here in each of the procedures. Leech (*Hirudina Sp.*) is used for bloodletting which is said to be safe in children.

**Scope & practice of *Panchakarma* in *Kaumarbhritya* (pediatric) practices with some facts:** Some basic facts and precautions about the *Panchakarma* or *Shodhana Chikitsa* in *Kaumarbhritya* are [2]:

1. One should not practice the *Vamana* and *Virechana* in children below 10 years but if there is natural removal through vomiting or purgation one should not stop it immediately [10].
2. One should not practice the *Nasya* before 7 year of life [10].
3. One should not practice gargling before 5 year of life [10].
4. One should not introduce *Dhumapana* as *Pashchata Karma* of *Vamana* before 18 years of life [10].
5. One should not apply the *Basti* in the child below one year of age [10].
6. One should not apply *Raktamokshana* with *Siravyadha* Vidhi before 16 years of age [10]

Reason for these general cautionary notes are because of there is no complete development of the *Ashayas* or organs in GI Tract (*Koshtha*) of the child as it is the growing phase, and implementation of such procedures may hampers the growth and may lead to future life threatening complications [2].

### AIMS AND OBJECTIVES:

1. To highlight and increase the awareness about the role of *Panchakarma* in Pediatric disorders
2. To evaluate the indications and contraindications of *Panchakarma* in newer pediatric health problems like ADHD etc

### MATERIAL AND METHODS

Data and information regarding Ayurveda *Panchakarma* therapy is collected from different Ayurveda Samhita and related texts, reference book, e-books, journals, health magazines, news paper, opinions of different *Panchakarma* and pediatric physicians, various research articles from different journals, web and e-books, research papers, dissertation and thesis from different institutes. Reference books and text books on *Panchakarma* and *Balaroga*

### DISCUSSION:

**VAMANA:** The procedure of *Purvakarma*, *Pradhanakarma* and *Paschatkarma* are similar to adults, and the variation being in the selection and dose of *Vamaka Dravya*, and in the *Samyak Vantalakshana* (the properly completion features).

**Vamana Dravyas** like *Madanaphala Churna*, *Vacha*, *Pippali*, *Saindhava* mixed with honey are practice in pediatric cases.

The **Vamana Dravya Dose** required is usually **3-5 gram of total drug** according to disease and patient's condition. One can wait for the maximum **48 minutes [13]** after administering the medicine for appearance of 1<sup>st</sup> episode of vomiting. If emesis does not get started by 48 minutes, one has to induce vomiting by putting the finger over posterior part of tongue and just touching the uvula [14]. One should look for improper *Vamana* (under or over) as both causes complications. The outcome of the *Vamana Karma* is assessed on the basis of number of episodes of emesis and the quantity as well as sequence with which the morbid *Dosha* removes from body [15]. Then patient is asking for rest and then bath and then diet is planned accordingly.

### Indication of vamana in pediatrics [16]

1. Immediately after birth with <i>Saindhava</i> and Ghee to remove <i>Garbhambu</i> [17].	2. Baby of mother with <i>Kaphaja Stanya Dushti</i> .
3. <i>Ksheerada Balak</i> with persistent vomiting [18]	4. <i>Kushtha</i> (Skin disorders like Psoriasis)
5. <i>Ksheeralasaka</i> [19]	6. <i>Shvitra</i> (Leukoderama)
7. <i>Balagraha</i> [20]	8. <i>Indralupta</i> (Tinea infections including Alopecia)
9. <i>Krimikoshtha</i> (Helminthiasis)	

For neonate the sophisticated and soothing medicine for *Vamana* is ***Saindhava (Rock salt) with Ghrita (Ghee)***, which removes the mucous plug and meconium easily from the oral and nasal cavity of newborn baby.

For pediatric population - ***Madanafala Choorna + Pippali Choorna + Saindhava + Vacha Choorna + Honey***.

### According to disease conditions

1. ***Kushtha*** (Skin disorders) - *Indrayava + Patola + Nimba + Yashtimadhu*.
2. ***Shvitra*** (Leukoderma) – *Indravaruni + Yashtimadhu + Pippali*.
3. ***Krimikoshtha*** (Worm infestations) – *Saindhava + Indrayava + Pippali + Vacha + Honey*.
4. ***Utklisha, Kotha, Utkotha*** (Atopic dermatitis, urticaria and other allergic skin manifestations) – *Madanaphala + Yashtimadhu + Kovidara + Saindhava + Honey*.

***Vamanopaga Dravya: Yashtimadhu Kwatha (Decoction of Yashtimadhu), Ikshu Rasa (Sugarcane Juice), Ksheera (Milk) [21]***

*Choorna* Dose – 3-5 gram

*Kashaya* Dose – 15 -20 ml

*Vamanopaga Dravya: Akantha Pana* (means should be taken in quantity until the stomach gets completely full so that no more intakes are possible)

**VIRECHANA:** The procedure of *Purvakarma, Pradhanakarma* and *Paschatkarma* are similar to adults, and the variation being in the selection and dose of *Virechana Dravya*. After the completion of *Snehapana*, patient is planned for next three days *Abhyanga* and *Svedana*. Then on day 4 of the *Snehapana* patient is asking for taking the medicines. The medicine to induce the purgation should be given after sunrise but before 10 AM.

***Virechaka Dravya*** – *Trvritavaleha, Aragvadhavaleha, Manibhadravaleha, Katuka, Abhayadi Modaka, Eranda Taila* mixed with milk, *Kalyana Vataka, Avipattikara Churna, Triphala Garmalo Vati* etc are practiced in pediatric cases.

**Virechaka Dravya Dose** – Varies from drug to drug according to disease and patients condition.

*Avaleha* for 10-14 years child 35-50 g

*Vataka* for 10 -14 years child 3-4 (500 mg each)

*Modaka* – 5-6 (500 mg each)

Dose should fix or adjusted according to *Vyadhi Bala* (Disease condition), *Atura Bala* (Physical capacity or tolerance of patients), *Ritu* (Season), and *Agni Bala* (Digestive capacity of patient)

One can wait for the maximum **2 hours** after introducing the medicine till the 1<sup>st</sup> episode of Purgation. If motion not gets started over 2 hours one has to introduce the next medicine and tries to induce motion. Also give seep of warm water to patient and keep hot fomentation over abdomen. One should look for under or over episode of motion. As both causes complications.

The outcome of the *Virechana Karma* is assessed on the basis of number of episodes of purgation and the quantity as well as sequence with which the morbid *Doshas* removes from body. Then patient is asking for rest and then bath and then diet is planned accordingly [22].

### INDICATION OF VIRECHANA IN PEDIATRICS [23]

<i>Annada Balak</i> with persistent vomiting	<b><u>Neurological Disorder :</u></b> I. Hemiplegics II. Hydrocephalus III. Vertebral stenosis IV. <b>GBS</b> (Gullien Barre Syndrome)
<i>Balagraha</i>	
<i>Phakka</i> (Rickets) [24]	
<i>Kushtha</i> (Skin disorders like Psoriasis)	
<i>Shvitra</i> (Leukoderama)	<b><u>Joint And Musculoskeletal Disorders</u></b> I. Rheumatic Arthritis II. Gout III. Post traumatic neuritis IV. Transverse myelitis V. Post fever arthralgia and joint stiffness
<i>Indralupta</i> (Tinea infections including Alopecia)	
<i>Krimikoshtha</i> (Helminthiasis)	
<i>Balapakshaghata</i> (Post Polio Paralytic case)	
<b><u>ASD (Autistic Spectrum Disorder)</u></b> I. <b>ADHD</b> (Attention Deficit hyperactive Disorder ) II. <b>PPD</b> (Persistent Pervasive Disorder) III. Asparger syndrome	
	<b><u>Myopatheis</u></b> I. <b>DMD</b> (Duchene Muscular Disorder) II. Primary Muscle Disorder

**BASTI:** It's very special treatment protocol and considered as the half treatment in the diseases which can be cured by medicines. *Basti* is given in multiple numbers like 8,12,16,30. There are two main types of *Basti* viz. *Anuvasana* and *Asthapana*, of which *Anuvasana* is enema with oil while *Asthapana* is enema of homogenous mixture of *Saindhava* etc. as mention earlier.

As a thumb rule one should not use the *Basti* of single type consecutively. Because continuous use of *Anuvasana Basti* increases *Kapha*, *Aama* and *Krimi* in *Koshtha* and hampers the process of digestion. While continuous use of *Asthapana Basti* leads to disease condition like osteoarthritis, cramps, blood in stool etc.

Therefore *Anuvasana* and *Asthapana Basti* are used one after other in group like 8,12,16,30.

1. **Yoga Basti [26]** – there are total 8 in number start with first *Anuvasana Basti* then alternate *Asthapana Basti* and last *Anuvasana* on 8<sup>th</sup> day of course. Hence there is 3 *Asthapana Basti* and 5 *Anuvasana Basti* in 8 *Basti*. *Yoga Basti* is indicated in *Kapha Pradhana Vyadhi*.
2. **Kala Basti [27]** - there are total 16 in number start with first *Anuvasana Basti* then alternate *Asthapana Basti* and last three *Anuvasana Basti* at the end of course. Hence there is 6 *Asthapana Basti* and 10 *Anuvasana Basti* in 16 *Basti*. *Kala Basti* is indicated in *Pitta Pradhana Vyadhi*.
3. **Karma Basti [28]** - there are total 30 in number start with first *Anuvasana Basti* then alternate *Asthapana Basti* and last five *Anuvasana Basti* at the end of course. Hence there is 12 *Asthapana Basti* and 18 *Anuvasana Basti* in 30 *Basti*. *Karma Basti* is indicated in *Vata Pradhana Vyadhi*.
4. **Chaturbhadra Kalpa Basti [29]** – this special protocol is explained in Kashyapa Samhita. In this course 4 *Anuvasana Basti* followed by 4 *Asthapana Basti* which again followed by 4 *Anuvasana Basti*. This *Chaturbhadra Kalpa Basti* is specially use in pediatric practice.

### INDICATION OF *BASTI* IN PEDIATRICS [30] –

<i>AnnadaBalak</i> with persistent vomiting	<b>Joint And Musculoskeletal Disorders</b> 1. Rheumatic Arthritis 2. Gout 3. Post traumatic neuritis 4. Transverse myelitis 5. Post fever arthralgia and joint stiffness
<i>Balagraha</i>	
<i>Phakka</i> (Rickets)	
<i>Krimikoshtha</i> (Helminthiasis)	
<i>Balapakshaghata</i> (Post Polio Paralytic case)	
<b>ASD (Autistic Spectrum Disorder)</b> I. ADHD (Attention Deficit Disorder) II. PPD (Persistent Pervasive Disorder) III. Asperger syndrome	<b>Myopathies</b> 1. Duschens Muscular Dystrophy (DMD) 2. Primary Muscle Disorder.
<b>Neurological Disorder Like</b> 1. Hemiplegics 2. Hydrocephalus 3. Gulliene Barre Syndrome(GBS)	<b>Psychotic Disorders</b> 1. Schizophrenia 2. Mental disorder
<b>Movement Disorders</b> 1. Ataxia 2. Choreoathetosis etc.	<b>Pediatric Convulsive Disorder</b> 1. Epilepsy 2. Seizure disorders

**NASYA:** Nasya is particularly use in diseases of Sense organ, mental disorders, neurological disorders etc. There are 3 types of Nasya viz. *Shodhana, Shamana* and *Brimhana* [31].

According to quantity or medicine use the *Nasya* are of 2 types [32] –

1. *Marsha* – with 4,6 or 8 drops of medicine
2. *Pratimarsha* – with 2 drops of medicines only

## INDICATION OF *NASYA* IN PEDIATRICS [33]

1. <i>Balagraha</i>	2. Ataxia
3. Autistic Spectrum Disorder (ASD)	4. Choreoathetosis etc.
5. Attention Deficit Hyperactive Disorder (ADHD)	6. Migraine and Headache
7. Persistent Pervasive Disorder (PPD)	8. Chronic Sinus Disorders
9. Neurological disorder like	10. Eye Disorders
11. Hemiplegics	12. Refractive errors
13. Hydrocephalus	14. Glaucoma
15. Vertebral stenosis	16. Facial palsy
17. Schizophrenia	18. Torticollis
19. Mental disorder	20. Baldness
21. Epilepsy	22. Dandruff
23. Seizure disorders	24. Premature graying of hairs

**RAKTAMOKSHANA:** It is one of the important *Panchakarma* in pediatric practice. Leech application, Scrapping, and bloodletting through vein are three main types which are in use nowadays [34].

## LEECH APPLICATION IN PEDIATRICS

*Ajagallika* [35]

*Pashanagrdhabha* (Parotid and preauricular swelling) [36]

*Panasika* (Fungal warts) [39]

*Visarpa* (Herpes Zoster) [37]

*Ahiputana* (Napkin rash) [38]

*Dadru, Charmadala* (Different eczemas) [39]

## SCRAPPING

*Indralupta* (Alopecia)

Different Tinea infections

*Shvitra* (local leukoderma)

## BLOODLETTING THROUGH VEINS

Skin disease flare up all over the body (overwhelming psoriasis)

Deep arthritic hemorrhages (Hemophilic patients)

## CONCLUSION:

*Kaumarbhritya* is one of the eight main branches of Ayurveda and deals with healthy progeny and pediatric care and management of disorders. *Shodhana Chikitsa* is one of the two prime treatment protocols explained in Ayurveda, which is popularly known as *Panchakarma* viz. *Vamana, Virechana, Basti, Nasya* and *Raktamokshana*. But the main procedures are masked away by the purvakarma (varieties of snehana and swedana) in the name of *Panchakarma* in common. These *Panchakarma* procedures are indicated in many pediatric disorders, though they are not directly indicated. There is a long list diseases in which the *Panchakarma* treatment modalities have been successfully carried out in our clinical practices, the newer disease entities too can be successfully treated with *Panchakarma*, once the disease pathology and entities involved such as *Dosha, Dushya* etc. are understood properly as per Ayurvedic guidelines. To understand such diseases, Acharya Charaka has given clear guidelines (*Anukta Vyadhi Vimana Sthana*, chapter 8). As children are in growing phase there are certain indication, contraindication and precautions to be taken while conducting the *Panchakarma* in children and with all these cautions and precautions there is wide scope for *Panchakarma* in pediatric practice.



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