

Virechana Karma and Amruta Choorna in the management of Panduroga w.s.r. to Iron deficiency anemia -A case study

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Abstract:

A disease which produces *Panduvarnata* in the body is known as *Panduroga*. It occurs by vitiation of *Pitta Dosha*. *Panduroga* can be correlated with anemia. Iron-deficiency anemia is a common nutritional disorder caused by nutritional deficiency and reduced bioavailability of iron. A patient suffering from *Panduroga* was treated for 103 days. *Panduta* (pallor), *Daurbalya* (weakness), *Ayasaja Shwasa* (dyspnea), *Pindikodveshtana* (cramps in the calf region), *Nidraluta* (sleepiness), *Shiroruk* (headache), *Sadana* (fatigue), *Gatra Shoola* (body pain) and *Agnimandya* (impaired appetite) were present in the patient. *Virechana Karma* is recommended in treatment of *Panduroga*. *Punarnawa Lashuna Kashaya* is used in *Virechana Karma* by Sri-Lankan traditional physicians in treatment of *Panduroga* effectively. *Bhavaprakasha Samhita* and *Danvantari Nighandu* recommend *Amruta Choorna* in treatment of *Panduroga*. No known scientific study has been carried out to evaluate the effect of these medicines. Therefore, present study was undertaken. After completion of entire treatment Hb level and Red Blood Cell count increased. *Virechana Karma* expels vitiated *Pitta Dosha*. *Punarnawa Lashuna Kashaya* and *Amruta Choorna* consists macro and micronutrients essential for formation of hemoglobin in red blood cells. It can be concluded that these medicines can be administered in treatment of *Panduroga* (Iron deficiency anemia) with effective results.

Keywords: *Amruta Choorna*, Iron deficiency anemia, *Panduroga*, *Punarnawa Lashuna Kashaya*, *Virechana Karma*.

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Introduction:

Panduroga is one of the diseases occurring by vitiation of *Pitta Dosha*. Aggravated *Dosha* with predominance of *Pitta* vitiates *Dhatu*. This vitiation of *Dhatu* cause sluggishness (*Shithilata*) and heaviness (*Gaurava*) in the *Dhatu* resulting in diminution of complexion (*Varna*), strength (*Bala*), unctuousness (*Sneha*) and the qualities of *Ojas*.^[1] *Pitta Dosha* destroys *Rakta Dhatu* (blood), *Mamsa Dhatu* (muscle tissue) and *Ojas* by its *Ushna* (hot) and *Sukshma* (penetrative) properties. This will produce *Pandutva* (pallor) in the body. Therefore, *Ojoguna* (properties of *Ojas*), *Varna* (colour), *Bala* (strength) are reduced in *Panduroga*.^[2]

According to *Charaka Samhita*, the general signs and symptoms of *Panduroga* are *Karnaksveda* (tinnitus), *Hatanala* (suppression of the digestive power), *Daurbalya* (weakness), *Sadana* (fatigue), *Bhrama* (giddiness), *Gatrashoola* (pain in the body), *Jvara* (fever), *Shwasa* (dyspnea), *Gaurava* (heaviness), *Agnimandya* (impaired appetite), *Aruchi* (anorexia), *Gatrapeditha* (limbs are being kneaded), *Sunakshikuta Shotha* (swelling of the orbital region), *Harita* (complexion becomes green), *Ksheernaloma* (falling out the body hair), *Hataprabha* (loss of luster in the body), *Kopana* (becomes irritable), *Shishiradvashi* (dislikes for cold things), *Nidraluk* (sleepiness), *Shteevana* (excessive spitting), *Alpavak* (less speaking), *Pindikotveshta* (cramps in the calf region) and *Padaruk Sadana* (pain and weakness in the lumbar region).^[3] *Panduroga* can be correlated with anemia based on its signs and symptoms. Anemia is a condition of reduction in the hemoglobin or red blood cells concentration of the peripheral blood in relation to age and sex. Pallor is the main cardinal sign of anemia and it can be seen in the skin, conjunctiva, nail beds, mucous membranes and palm. The non-specific signs of iron deficiency anemia are

pallor in mucus membrane, tachypnea, raised jugular venous pressure, flow murmurs, ankle edema, postural hypotension and tachycardia.^[4]

Virechana Karma (purgation therapy) helps to eliminate vitiated *Dosha* especially *Pitta Dosha* thorough the *Adhobhaga* (anus).^[5] *Snehapanoktha Virechana Karma* is mentioned as one of the therapeutic measures in treatment of *Panduroga*.^[6] *Rasayana* (rejuvenation therapy) is a branch of Ayurveda which aims at preventing or delaying degenerative processes, eliminating diseases and prolonging life. *Naimittika Rasayana* is used to promote health of a particular tissue or system or to prevent their disorders.^[7] *Amurta Choorna* is mentioned as *Naimittika Rasayana* for promotion of intellect in *Charaka Samhita*.^[8] *Bhavaprakasha Samhita* and *Danvantari Nighandu* recommended *Amurta* (*Guduchi*) in management of *Panduroga*.^[9,10] *Punarnawa Lashuna Kashaya* is used by Sri-Lankan traditional physicians in *Panduroga* with effective results. Therefore, these drugs were selected to treat a patient suffering from *Panduroga* in the present study.

Case Report:

A 63 year old female patient, who attended the Indoor Patients Department of Ayurveda Teaching Hospital, Borella, Sri Lanka for treatment of pain with general weakness of the body, dyspnea, headache, leg cramps and giddiness since three months. The patient was examined thoroughly. Severities of the clinical features were recorded before treatment and after treatment using a specially prepared grading scale as given below. The relevant laboratory investigations, such as general blood picture, hemoglobin concentration (Hb) and red blood cell count (RBC) were carried out before commencement of the treatment, after *Virechana Karma*, and after completion of entire

treatment. The patient was treated for 103 days as given in Table 1.

Grading scale

01. *Panduta* in *Twak* (Pallor skin)

Nil	0	Coppery red
Mild	1	Light red
Moderate	2	Dark pink
Severe	3	Light pink
More severe	4	Pallor

02. *Daurbalya* (General weakness)

Nil	0	No weakness
Mild	1	Occasional weakness
Moderate	2	Intermittent weakness
Severe	3	Frequent weakness
More severe	4	Always weakness

03. *Ayasaja Shwasa* (Dyspnea on exertion)

Nil	0	No dyspnea on exertion
Mild	1	Dyspnea after heavy work and relieved soon
Moderate	2	Dyspnea after moderate work but relieved
Severe	3	Dyspnea after mild work and persist for a long time
More severe	4	Dyspnea even at rest

04. *Pindikodweshtana* (Leg cramps)

Nil	0	Absent
Mild	1	Cramps in legs only during heavy work
Moderate	2	Cramps in legs during moderate work
Severe	3	Cramps in legs during light work
More severe	4	Cramps in legs throughout day even at rest

05. *Nidraluta* (Sleepiness)

Nil	0	Normal sleep 7-8 hrs. per day
Mild	1	Sleep up to 9-10 hrs. per day

Moderate	2	Sleep up to 11-12 hrs. per day
Severe	3	Sleep up to 13-14 hrs. per day
More severe	4	Feel sleepy in whole day

06. *Shiroruk* (Headache)

Nil	0	No headache
Mild	1	Headache 1-2 times per week
Moderate	2	Headache 3-5 times per week
Severe	3	Headache more than 5 times per week
More severe	4	Continuous headache during whole day

07. *Bhrama* (Giddiness)

Nil	0	No feeling of giddiness
Mild	1	Occasionally feels giddiness
Moderate	2	Intermittently feels giddiness
Severe	3	Frequently feels giddiness
More severe	4	Always feels giddiness

08. *Sadana* (Fatigue)

Nil	0	No fatigue
Mild	1	Fatigue in doing hard work
Moderate	2	Fatigue in doing routing work
Severe	3	Fatigue in doing mild work
More severe	4	Fatigue even at rest

09. *Gatra Shoola* (Body ache)

Nil	0	No body ache
Mild	1	Occasionally feels body ache
Moderate	2	Intermittently feels body ache
Severe	3	Frequently feels body ache
More severe	4	Always feels body ache

10. *Agnimandya* (Impaired appetite)

Nil	0	Normal appetite
Mild	1	Impaired appetite occasionally
Moderate	2	Impaired appetite intermittently
Severe	3	Impaired appetite often
More severe	4	Impaired appetite always

11. Aruchi (Anorexia)

Nil	0	No anorexia
Mild	1	Occasionally feels anorexia
Moderate	2	Intermittently feels anorexia
Severe	3	Frequently feels anorexia
More severe	4	Always feels anorexia

Procedure of Virechana Karma

According to Ayurveda *Deepana*, *Pachana*, *Snehana* and *Swedana* should be carried out prior to *Panchakarma*. 2g of powder of dried fruits of *Piper longum* (*Pippali Choorna*) was given orally after breakfast for a period of 3 days to enhance *Agni* (digestive fire) as *Deepana* and *Pachana Aushadha*. *Sneha Karma* was performed by administering ghee in progressive doses (*Snehapana*/ internal oleation) orally for a period of 3 days till *Samyak Snigdha Lakshana* (symptoms of adequate oleation) are present.

The patients was subjected to *Sweda Karma* (fomentation) for a period of 3 days after presence of *Samyak Snigdha Lakshana*. In this context *Parisheka Sweda* was carried out.

Following morning, 120ml of *Punarnawa Lashuna Kashaya* was administered orally to the patient on an empty stomach at 6.00 a.m. as the purgative. Before administering purgatives 15ml of sesame oil was applied on the abdomen and back region. After that, fomentation was carried out using hot water vapor. After administering purgative patient was made to drink decoction prepared with *Glycyrrhiza glabra* to facilitate purgation time to time. The patients had five bowel movements. After *Virechana Karma*, the patient was made to follow *Samsarjana Krama* for three days (Day 11 to Day 13).

Preparation of Punarnawa Lashuna Kashaya:

Punarnawa Lashuna Kashaya was prepared according to the method of traditional family *Weerasingha Veda Paramparawa*. Ingredients of the *Punarnawa Lashuna Kashaya* along with their quantities are given in table 2. These ingredients were mixed with 960ml of water and boiled down to 120ml.

Preparation of Amurta Choorna:

Dry stem of *Tinospora cordifolia* (Family: Menispermaceae; Sanskrit name: *Amurta*) were cut into small pieces and powdered. This was used as *Amurta Choorna* in the present study.

Table 1: Treatment protocol:

Chikitsa	Formulae	Administration of treatment	Treatment given													
			Day													
			Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14-103 (90 days)
<i>Deepana/</i>	2 g of	8.00														

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<i>Pachana</i>	powder of fruit of <i>Piper longum</i> (<i>Pippali Choorna</i>)	am after breakfast	√	√	√											
<i>Snehana</i>	30ml of Ghee	Empty stomach				√										
	60ml of Ghee	Empty stomach					√									
	90ml of Ghee	Empty stomach						√								
<i>Swedana</i>	<i>Parisheka Sweda</i>	10.00 am							√	√	√					
<i>Virechana</i>	120ml of <i>Punarnawa Lashuna Kashaya</i>	Empty stomach 6.00 am									√					
<i>Samsarjana Karma</i>												√	√	√		
<i>Naimittika Rasayana</i>	5g of powder of <i>Amurta Choorna</i> mixed with each of 2.5ml of ghee and bee's honey	twice a day with warm water after meals														√

Table 2: Ingredients of the *Punarnawa Lashuna Kashaya*:

Sanskrit name	Botanical name	Family	Part used	Quantity
<i>Rakta Punarnava</i>	<i>Boerhavia diffusa</i>	Nystaginaceae	Entire plant	30g
<i>Haritaki</i>	<i>Terminalia chebula</i>	Combretaceae	Pericarp	20g
<i>Lashuna</i>	<i>Allium sativum</i>	Liliaceae	Cloves	10g

Table 3: Percentage of reduction of symptoms:

Clinical features	BT	AT			
	Grade	After Virechana Karma		After entire treatment (Virechana Karma followed by Naimittika Rasayana)	
		Grade	Percentage of relief	Grade	Percentage of relief
<i>Panduta</i> (Pallor)	3	3	0%	0	100%
<i>Daurbalya</i> (General weakness)	3	2	33.33%	0	100%
<i>Ayasaja Shwasa</i> (Dyspnea on exertion)	3	2	33.33%	0	100%
<i>Pindikodveshtana</i> (Leg cramps)	4	1	75%	0	100%
<i>Nidraluta</i> (Sleepiness)	4	1	75%	0	100%
<i>Shiroruk</i> (Headache)	3	1	66.67%	1	66.67%
<i>Bhrama</i> (Giddiness)	2	0	100%	0	100%
<i>Sadana</i> (Fatigue)	3	2	33.33%	0	100%
<i>Gatra Shoola</i> (Body ache)	3	1	66.67%	0	100%
<i>Agnimandya</i> (Impaired appetite)	3	0	100%	0	100%
<i>Aruchi</i> (Anorexia)	2	1	50%	0	100%
BT = Before Treatment; AT = After Treatment					

Table 4: Effect of therapy on Investigation:

Investigation	Before treatment	After treatment			
		After Virechana	During and After Entire Treatment (<i>Virechana Karma</i> followed by <i>Naimittika Rasayana</i>)		
		Day 14	Day 43	Day 73	Day 103
Hemoglobin	10.2%	10.2%	10.9%	10.9%	12.8%
General blood picture	Moderate anisochromic & normocytic	Moderate anisochromic & anisocytic	Moderate normochromic & normocytic	Moderate anisochromic & normocytic	Normocytic Normochromic
RBC	4.03x 10 ⁶	4.03x 10 ⁶	4.04x 10 ⁶	4.04x 10 ⁶	4.07x 10 ⁶

Results:

After *Virechana Karma*, *Daurbalya*, *Ayasaja Shwasa* and *Sadana* were reduced by 33.33%; *Aruchi* was reduced by 50%; *Shiroruk* and *Gatra Shoola* were reduced by 66.67%; *Pindikodveshtana* and *Nidraluta* were reduced by 75%; *Bhrama* and *Agnimandya* were reduced by 100%; but no change was observed in *Panduta*. After completion of entire treatment, all the symptoms were reduced by 100% except *Shiroruk* as shown in Table 3. After 28 days of follow up period the symptoms of *Shiroruk* was also disappeared.

After completion of entire treatment Hb level was increases from 10.2% to 12.8% and Red Blood Cell count was increased from 4.03×10^6 to 4.07×10^6 . General Blood Picture was moderate anisochromic before treatment and after completion of entire treatment it was Normocytic Normochromic as shown in table 4

Discussion:

Virechana Karma is a one of the therapeutic measures described under principles of treatment of *Panduroga*.^[11] Ingredients of *Punarnawa Lashuna Kashaya* possess *Madhura*, *Tikta* and *Kashaya Rasa*; *Guru Guna* and *Madhura Vipaka*. Therefore, it pacifies vitiated *Pitta Dosha* in the body. The drugs with property of *Madhura Vipaka* produces laxative effect in the body.^[12] Some ingredients of *Punarnawa Lashuna Kashaya* such as *T. chebula* and *B. diffusa* possess *Anulomana* property.^[13,14] Therefore, this decoction acts as a *Mrudu Anulomana Aushada* (laxative) and expel vitiated *Pitta Dosha* from the body in patients suffering from *Panduroga* (anemia).

Amurta (*Tinospora cordifolia*) possess *Pittahara* properties due to its *Tikta* and *Kashaya Rasa*; *Snigdha Guna*; *Madhura Vipaka*. Hence *Amurta* is beneficial in management of diseases occurring due to vitiation of *Pitta Dosha*

including *Panduroga*. It has *Rasayana*, *Deepana*, *Balya*, and *Hrdya* properties.^[15] *Amruta Choorna* have high nutritional values which are beneficial to increase iron content of the blood. They also provide nutrition, promote health and prolong life span. According to modern science, *Amurta* (*Tinospora cordifolia*) contains vitamins B, C and E, Ferrous (Iron); Calcium, Copper and Potassium.^[16] Vitamin C helps in absorption of iron and increases the bio-availability of the body.^[17] Vitamins C and B are essential for the formation of hemoglobin in red blood cells.^[18] Vitamin B helps to transport oxygen to body cells and helps to prevent tiredness and weakness of the body. Vitamin E helps to protect the body from damages caused by free radicals, due to its antioxidant property.^[19] It has properties of hepato-protective, immunomodulatory and blood purification activities.^[20] Hence it facilitates *Raktavardaka* (improves haematopoiesis), *Raktaprasadeniya* and *Raktashodhaka* (blood purification).^[21] Therefore, *Amurta Choorna* will enhance the formation of hemoglobin and red cells.

Conclusion:

Virechana Karma using *Punarnawa Lashuna Kashaya*, followed by administration of *Amurta Choorna* is effective in treatment of *Panduroga* (iron deficiency anemia). It is suggested to study the effect of these treatments using large number of patients.

Limitation of the study:

As this is a single case report, it is suggested to that the study should be tried with a large sample for scientific validation.

Consent of patient:

Written consent has been taken for treatment as well as publication without disclosing the id of patient.

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