



Case Study

AYURVEDIC MANAGEMENT OF HOMOZYGOUS SICKLE CELL ANAEMIA (HbSS)

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ABSTRACT

Sickle Cell Anaemia (SCA) is a hereditary hemoglobinopathy characterized by chronic hemolytic anemia, recurrent vaso-occlusive crises, and reduced quality of life. In Ayurveda, it may be correlated with *Sahaja Pandu* or *Beejadushtijanya Pandu* due to its hereditary origin and clinical features. **Aim:** To evaluate the efficacy of Ayurvedic management in improving clinical symptoms and hematological parameters in a patient with Homozygous Sickle Cell Anaemia (HbSS). **Case Presentation:** A 43-year-old male with Homozygous Sickle Cell Anaemia presented with recurrent lower-limb and joint pain, generalized weakness, anorexia, giddiness, abdominal pain, intermittent constipation, poor weight maintenance, and recurrent febrile episodes despite prolonged conventional treatment. **Intervention:** The patient received an Ayurvedic treatment regimen comprising *Chyavanaprasha*, *Haritaki Churna*, *Aampachaka Vati*, *Punarnava Mandura*, *Dhatri Loha*, *Dadimadi Ghrita*, *Punarnava Amrutadi Granules*, *Raktaposhaka Vati*, Tablet SC-3, Liv-52, Amyron Syrup, and Xerfer Tablets for six months. **Results:** Significant improvement was observed in pain, weakness, appetite, bowel habits, recurrent fever, and quality of life. Hemoglobin levels increased from 5.7g/dL to 10.0g/dL. **Conclusion:** Ayurvedic management may provide beneficial supportive care in Sickle Cell Anaemia and improve clinical outcomes and quality of life.

INTRODUCTION

Sickle Cell Disease (SCD) is a group of inherited hemoglobin disorders caused by a mutation in the β -globin gene, resulting in the formation of abnormal hemoglobin S (HbS). In this condition, valine replaces glutamic acid at the sixth position of the β -globin chain, leading to structural and functional abnormalities in red blood cells. Under conditions such as hypoxia, dehydration, infection, or stress, red blood cells become rigid and assume a characteristic sickle shape, causing chronic hemolysis, vaso-occlusion, tissue ischemia, and recurrent painful crises. Sickle Cell Anemia (SCA), the homozygous form of the disease (HbSS), is one of the most prevalent hereditary hemoglobinopathies worldwide and constitutes a

major health concern in India, particularly among tribal populations of Maharashtra, Chhattisgarh, Odisha, Madhya Pradesh, and other regions of central India. [1-3]

Clinical manifestations of SCD usually begin during infancy and vary according to genotype and disease severity. Common features include chronic anemia, pallor, fatigue, recurrent pain episodes, growth retardation, splenomegaly, susceptibility to infections, dyspnea, jaundice, and complications involving multiple organ systems. Contemporary management primarily focuses on supportive care through adequate hydration, folic acid supplementation, vaccination, blood transfusion therapy, analgesics, and hydroxyurea administration. Hematopoietic stem cell transplantation remains the only established curative option but is applicable to a limited number of patients. [1,2,4]

From an Ayurvedic perspective, Sickle Cell Disease can be correlated with *Pandu Vyadhi*, particularly *Beejadushtijanya Pandu*, *Kulaja Pandu*, or *Adibala Pravritta Vyadhi*, owing to its hereditary

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nature and symptomatological resemblance to chronic anemia. The characteristic features of *Panduta* (pallor), *Daurbalya* (weakness), *Shrama* (fatigue), *Shwasa* (dyspnea), *Aruchi* (anorexia), *Bhrama* (giddiness), *Jwara* (fever), and generalized body pain show close similarity with the clinical presentation of SCD. Ayurveda describes *Pandu* as a disorder predominantly caused by vitiation of *Pitta Dosha*, leading to impairment of *Rasa* and *Rakta Dhatu*, diminished tissue nourishment, and loss of strength and complexion. Furthermore, classical texts explain hereditary disorders through defects in *Beeja*, *Kshetra*, *Ritu*, and *Ambu*, which conceptually resemble congenital and genetic abnormalities.^[2-5]

Considering the chronic and largely incurable nature of SCD, Ayurveda emphasizes holistic management aimed at improving quality of life through *Nidana Parivarjana* (avoidance of causative factors), *Pathya-Apathya* adherence, *Rasayana Chikitsa*, *Panchakarma* procedures, and appropriate *Shamana* therapies. These measures are intended to enhance hematopoietic function, improve nourishment of tissues, maintain *Doshic* equilibrium, and reduce disease-related morbidity. Therefore, Ayurvedic interventions may serve as valuable complementary approaches in the long-term management of Sickle Cell Disease and contribute toward improving the overall health and well-being of affected individuals.^[2-5]

AIM AND OBJECTIVE

The present case study was conducted to evaluate the therapeutic efficacy of an Ayurvedic treatment regimen in the management of Sickle Cell Anaemia (SCA), with special emphasis on its role in improving the patient's quality of life. The objective was to assess the impact of Ayurvedic interventions on disease-related clinical manifestations, functional capacity, and overall health status, while exploring their potential as a supportive therapeutic approach for the long-term management of this chronic hereditary haemoglobin disorder.

Study Design

The present study is a single-case clinical study conducted in the private Outpatient Department (OPD). The study was undertaken to evaluate the clinical outcomes of Ayurvedic management in a patient diagnosed with Sickle Cell Anaemia.

MATERIALS AND METHODS

A 43-year-old Hindu male patient presented to the Outpatient Department (OPD) with a known diagnosis of Sickle Cell Anaemia (SCA). The patient reported recurrent episodes of severe pain involving the lower limbs and multiple joints, accompanied by generalized body ache, weakness, giddiness, anorexia, intermittent abdominal pain, occasional constipation,

poor weight maintenance, and recurrent febrile episodes. These symptoms had been recurring for several years and were associated with periodic exacerbations that adversely affected his daily activities and overall quality of life. The patient belonged to a middle socioeconomic background and had been receiving conventional symptomatic management, including antipyretics, analgesics, folic acid supplementation, and hydroxyurea therapy for a prolonged duration. Despite regular treatment, he continued to experience recurrent painful crises and persistence of associated symptoms, indicating an incomplete response to the existing therapeutic regimen. Therefore, the patient sought Ayurvedic intervention with the objective of achieving better symptomatic relief, improving functional status, and enhancing overall well-being.

History of Present Illness

The patient was apparently asymptomatic during early childhood and remained unaware of his underlying disease status until he experienced recurrent episodes of pain crisis. Over the years, he developed intermittent severe pain involving the lower limbs, multiple joints, and abdomen, associated with generalized weakness, giddiness, anorexia, and recurrent febrile episodes. These painful crises occurred at intervals of approximately 1–3 months, persisted for 5–7 days, and frequently required outpatient consultations, with occasional hospital admissions for symptomatic management. Hematological investigations performed during the course of evaluation confirmed the diagnosis of Sickle Cell Disease (HbSS genotype). Family screening subsequently revealed that both parents were carriers of the sickle cell trait (HbAS).

Following diagnosis, the patient received conventional medical management for several years, including analgesics, antipyretics, folic acid supplementation, and hydroxyurea therapy. Although these interventions provided temporary symptomatic relief, recurrent vaso-occlusive pain episodes and associated complaints continued to occur, resulting in significant impairment of daily functioning and quality of life. In search of better disease control, the patient also underwent Ayurvedic treatment from local practitioners for a limited period. While a modest reduction in the frequency of pain crises was reported, sustained symptomatic improvement was not achieved. Owing to the persistence of symptoms and recurrent exacerbations despite previous treatments, the patient presented to the Ayurvedic outpatient department for further evaluation and management.

History of Past Illness

- **Drug History:** History of intermittent use of analgesics, antipyretics, folic acid supplementation, iron preparations, and hydroxyurea for symptomatic management.

- **Family History:** Positive family history of sickle cell disorder; parental screening revealed sickle cell trait (HbAS), suggesting hereditary transmission.
- **Past Medical History:** No other significant medical or surgical illness relevant to the present condition.

Table 1: General examination

Parameter	Observation
General appearance	Fair general condition
Body temperature	100.2°F
Pulse rate	82 beats/minute
Respiratory rate	24 breaths/minute
Height	154 cm
Weight	41kg

Table 2: Ashtavidha Parikshan

Parameter	Observation
<i>Nadi</i> (pulse)	<i>Pitta-Vata</i> predominant pulse pattern (<i>Pitta Pradhana Vata Anubandha</i>)
<i>Mala</i> (bowel habit)	Intermittent constipation
<i>Mutra</i> (micturition)	Normal frequency, approximately 5–6 times per day
<i>Jivha</i> (tongue)	Coated tongue (<i>Saama Jivha</i>)
<i>Shabda</i> (speech)	Clear and coherent speech (<i>Spashta Shabda</i>)
<i>Sparsha</i> (touch/skin temperature)	Warm to touch (<i>Ushna Sparsha</i>)
<i>Druk</i> (eyes)	Pallor observed in sclera (<i>Scleral Panduta</i>)
<i>Aakruti</i> (body build)	Moderately built physique (<i>Madhyama Aakruti</i>)

Table 3: Samprapti Ghatak ^[6]

Parameter	Observation
<i>Dosha</i>	Predominant involvement of <i>Pitta</i> with associated vitiation of all three <i>Doshas</i> (<i>Pitta-pradhana Tridoshaja</i>)
<i>Dushya</i>	<i>Rasa</i> , <i>Rakta</i> , <i>Twak</i> , and <i>Mamsa Dhatu</i>
<i>Srotas</i> Involved	<i>Rasavaha</i> , <i>Raktavaha</i> , and <i>Mamsavaha Srotas</i>
<i>Agni</i>	Involvement of both <i>Jatharagni</i> and <i>Dhatvagni</i>
<i>Udbhava Sthana</i>	<i>Amashaya</i> (site of origin of pathogenesis)
<i>Sanchara Sthana</i>	Systemic dissemination through the body, particularly involving <i>Twak</i> (<i>Sarvanga Twak</i>)
<i>Vyakta Sthana</i>	Manifestation predominantly at the level of <i>Twak</i> (skin)
<i>Svabhava</i>	Chronic and persistent disease course (<i>Chirakari</i>)

Clinical Examination

Clinical assessment revealed a *Pitta*-predominant *Tridoshaja* constitution (*Pitta-pradhana Tridoshaja Prakrti*) with features suggestive of *Mandagni*, *Krura Kosta*, and *Madhyama Sharira Bala*. The patient also reported disturbed sleep (*Khandita Nidra*), primarily attributable to recurrent painful episodes. Findings observed during examination were consistent with the classical descriptions of *Pandu Vyadhi*, including *Panduta* (pallor), *Daurbalya* (generalized weakness), *Aruchi* (loss of appetite),

Shrama (easy fatigability), *Bhrama* (giddiness), and intermittent *Jvara* (fever).

Systemic examination of the respiratory, cardiovascular, and central nervous systems did not reveal any significant abnormality. On abdominal examination, mild splenic enlargement with tenderness on palpation was noted. The patient further complained of recurrent pain involving the lower limbs and joints, abdominal discomfort, occasional constipation, poor nutritional status, and reduced

physical endurance, which collectively affected his day-to-day activities and quality of life.

Based on the clinical presentation, Ayurvedic assessment, and classical understanding of *Beejadushtijanya Pandu* under the spectrum of *Adibala Pravritta Vyadhi*, the case was diagnosed as *Pandu Vyadhi* with hereditary predisposition, correlating with Sickle Cell Disease. The treatment protocol was therefore planned considering both the *Pandu Chikitsa Siddhanta* and the chronic hereditary nature (*Sahaja/Anuvanshika Bhava*) of the disease, with the objective of improving functional status, reducing symptom severity, and enhancing overall quality of life.

Differential Diagnosis

1. Sickle β -thalassemia
2. Sickle α -thalassemia
3. Sickle Cell Trait (HbAS)

Diagnosis: The patient was diagnosed with Homozygous Sickle Cell Anaemia (HbSS) based on the clinical presentation consistent with *Pandu Roga* in the Ayurvedic framework and corroborated by hematological investigations demonstrating the HbSS genotype.

Nidana Panchaka

The diagnosis was established based on the principles of *Nidana Panchaka*, comprising *Nidana* (etiological factors), *Purvarupa* (premonitory manifestations), *Rupa* (clinical features), *Upashaya* (relieving/aggravating factors), and *Samprapti* (pathogenesis). These parameters facilitated a comprehensive Ayurvedic understanding of the disease process and aided in correlating the condition with *Beejadushtijanya Pandu Vyadhi*.

Table 4: Nidana Panchaka Assessment

Component	Findings
<i>Nidana</i> (etiological factors)	
<i>Aharaja Nidana</i>	Frequent consumption of <i>Amla</i> (sour), <i>Lavana</i> (salty), <i>Ushna</i> (hot and spicy) foods, processed/junk foods, and <i>Viruddha Ahara</i> (incompatible dietary combinations).
<i>Viharaja Nidana</i>	Irregular lifestyle practices, improper adherence to seasonal regimens, excessive daytime sleep (<i>Diwasvapna</i>), and suppression of natural urges (<i>Vega Dharana</i>).
<i>Manasika Nidana</i>	Psychological stressors such as anxiety, fear, and emotional disturbances.
<i>Purvarupa</i> (prodromal features)	<i>Hrudspandana</i> (palpitations), <i>Rukshata</i> (dryness), <i>Swedabhava</i> (reduced perspiration), and <i>Shrama</i> (easy fatigability).
<i>Rupa</i> (clinical manifestations)	<i>Gatrashoola</i> (generalized body pain), <i>Pindikodveshtana</i> (pain/cramps in calf muscles), <i>Udara Shoola</i> (abdominal pain), <i>Hataprabha</i> (loss of complexion and lustre), <i>Malavastambha</i> (constipation), <i>Jwara</i> (intermittent fever), <i>Bhrama</i> (giddiness), <i>Aruchi</i> (loss of appetite), <i>Daurbalya</i> (generalized weakness), and <i>Kati-Pada Sadan</i> (weakness and pain in the lower back and lower limbs).
<i>Upashaya</i>	Temporary symptomatic relief with rest, hydration, and supportive medications; however, symptoms showed recurrent exacerbations.
<i>Samprapti</i>	<i>Pitta-pradhana Tridosha Dushti</i> involving <i>Rasa</i> , <i>Rakta</i> , <i>Twak</i> , and <i>Mamsa Dhatu</i> , affecting <i>Rasavaha</i> and <i>Raktavaha Srotas</i> , leading to manifestations resembling <i>Pandu Vyadhi</i> with chronic recurrent symptomatology.

Treatment Protocol

Considering the chronic hereditary nature of the disease and its correlation with *Beejadushtijanya Pandu Vyadhi*, a treatment regimen comprising *Rasayana Chikitsa* and *Shamana Chikitsa* was planned with the objectives of improving *Rakta Dhatu Poshana*, enhancing strength, correcting *Agni Dushti*, reducing symptom recurrence, and improving overall quality of life.

Table 5: Internal Medications Administered

Treatment Modality	Drug/Formulation	Dose	Anupana	Time of Administration	Duration
<i>Rasayana Chikitsa</i>	<i>Chyavanaprasha</i>	1 teaspoon twice daily	Lukewarm water	After meals	1 month
	<i>Haritaki Churna</i>	2 g	Lukewarm water	At bedtime	15 days

<i>Shamana Chikitsa</i>	<i>Aampachaka Vati</i>	250mg twice daily	Lukewarm water	Before meals	1 month
	<i>Punarnava Mandura</i>	250mg twice daily	Lukewarm water	After meals	1 month
	<i>Dhatri Loha</i>	500mg twice daily	Lukewarm water	After meals	1 month
	<i>Dadimadi Ghrita</i>	10ml twice daily	Lukewarm water	After meals	1 month
	<i>Punarnava Amrutadi Granules</i>	5gm twice daily	Lukewarm water	After meals	2 months
	<i>Raktaposhaka Vati</i>	2 tablets twice daily	Lukewarm water	Before meals	3 months
	Tablet SC-3	2 tablets twice daily	Lukewarm water	After meals	6 months
	Tablet Liv-52	1 tablet twice daily	Lukewarm water	After meals	1 month
	Syrup Amyron	10 ml twice daily	As directed	After meals	1 month
	Tablet Xerfer	1 tablet twice daily	Lukewarm water	After meals	1 month

Treatment Duration

The patient underwent Ayurvedic management for a total duration of six months. Lukewarm water was prescribed as the principal *Anupana* for most formulations. The treatment strategy was designed to achieve *Amapachana*, *Agnideepana*, *Rakta Prasadana*, *Rakta Dhatu Poshana*, and *Rasayana* effects, thereby addressing the pathophysiological basis of *Pitta-pradhana Tridoshaja Pandu Vyadhi* and supporting long-term clinical improvement in Sickle Cell Anaemia.

Table 6: Effect of Treatment on Clinical Symptoms

S.No.	Symptom	Score Description	BT (Before Treatment)	AT (After Treatment)
1	Pain in lower limbs and joints (<i>Gatrashoola</i>)	0=Absent, 1=Mild, 2= Moderate, 3= Severe	3	1
2	Loss of appetite (<i>Aruchi</i>)	0=Normal appetite, 1= reduced appetite	1	0
3	Generalized weakness (<i>Daurbalya</i>)	0=Absent, 1=Mild, 2= Moderate, 3 = Severe	2	1
4	Fever (<i>Jwara</i>)	0= Absent, 1= Present	1	0
5	Fatigability (<i>Shrama</i>)	0= Absent, 1= Present	1	0
6	Constipation (<i>Malavastambha</i>)	0= Absent, 1= Present	1	0
7	Giddiness (<i>Bhrama</i>)	0= Absent, 1= Mild, 2= Moderate, 3= Severe	2	0
8	Abdominal pain (<i>Udara Shoola</i>)	0= Absent, 1= Mild, 2= Moderate, 3= Severe	2	0

Table 7: Comparative Haematological Investigation Results Before and After Treatment

Parameter	Before Treatment (10-09-2024)	During Treatment (16-12-2024)	After Treatment (30-03-2026)	Reference Range
Hemoglobin (Hb) (g/dL)	5.70	9.60	10.00	12-16
Hematocrit (HCT) (%)	18.10	23.30	20.80	32-47
RBC Count (Million/cmm)	1.65	4.10	3.18	4.2-5.5
MCV (fL)	109.70	56.83	65.41	78-100
MCH (pg)	34.55	23.41	19.18	27-33
MCHC (g/dL)	31.49	41.20	29.33	32-36

Total WBC Count (/cmm)	3,100	5,300	14,500	4,000–10,000
Neutrophils (%)	58	62	90	50–70
Lymphocytes (%)	35	30	6	20–40
Monocytes (%)	4	5	2	3–12
Eosinophils (%)	3	3	2	2–6
Platelet Count (/cmm)	250,000	238,000	247,000	150,000–450,000

RESULTS AND DISCUSSION

The present case of Sick Cell Anaemia was managed using a multidimensional Ayurvedic approach comprising *Rasayana*, *Deepana-Pachana*, *Raktavardhaka*, and *Raktaposhaka* interventions. From an Ayurvedic perspective, Sick Cell Anaemia can be correlated with *Sahaja Pandu*, wherein *Beejadushti*, *Agnimandya*, *Rakta Kshaya*, and subsequent *Tridosha Dushti* contribute to the manifestation of clinical features such as pallor, fatigue, anorexia, generalized weakness, recurrent painful crises, and impaired quality of life.^[7-10]

Initially, *Aampachaka Vati* along with *Haritaki Churna* was administered to correct *Agnimandya* and facilitate *Ama Pachana*. Restoration of digestive and metabolic functions is considered the cornerstone in the management of *Pandu Roga*, as proper functioning of *Jatharagni* and *Dhatvagni* ensures adequate nourishment of *Rasa* and *Rakta Dhatu*. The *Deepana*, *Pachana*, and *Vatanulomana* properties of these formulations contributed to improvement in appetite, bowel regularity, and reduction in abdominal discomfort.^[13-16]

Chyavanaprasha, a classical *Rasayana* preparation, was incorporated to improve immunity, tissue nutrition, and overall vitality. Owing to its antioxidant and rejuvenative properties, it may have enhanced the patient's resistance to recurrent infections and supported better physical endurance. The observed improvement in strength, appetite, and general wellbeing can be attributed to its *Rasayana* effect on body tissues.^[17]

The administration of *Punarnava Mandura*, *Dhatri Loha*, Amyron Syrup, and Xerfer Tablets was aimed at correcting anaemia and enhancing haematopoiesis. *Punarnava Mandura* possesses *Panduhara*, *Shothahara*, *Raktavardhaka*, and hepatoprotective properties, while *Dhatri Loha* supports haemoglobin synthesis and improves iron assimilation without causing significant gastrointestinal intolerance. *Amalaki*-containing formulations provide antioxidant support and facilitate iron absorption, thereby improving the quality of *Rakta Dhatu*. Improvement in pallor, fatigue, dizziness,

and overall energy levels observed in the patient may be associated with these therapeutic actions.^[13,21,22]

Dadimadi Ghrita was prescribed to enhance digestion, assimilation, and tissue nourishment. Its *Pittashamaka*, *Balya*, and *Agnivardhaka* properties support the correction of metabolic dysfunction and improve nutritional status. This may have contributed to the observed increase in appetite, gradual weight gain, and reduction in generalized weakness.^[12,13]

Raktaposhaka Vati was included to improve the formation and quality of blood tissue through stimulation of *Raktadhatvagni*. The formulation contains ingredients possessing *Deepana*, *Pachana*, antioxidant, and haematinic properties, which collectively help in reversing the pathological process of *Pandu*. Improvement in physical activity, reduction in weakness, and enhancement of functional capacity may be attributed to the sustained use of this formulation.^[11,13,14,19,20]

Tablet SC-3, containing herbal ingredients such as *Guduchi*, *Sharapunkha*, *Bhumyamalaki*, and *Bhringaraja*, was administered as a long-term supportive therapy. These drugs are known for their *Rasayana*, immunomodulatory, anti-inflammatory, hepatoprotective, and splenic protective properties. Their action on *Raktavaha Srotas* and *Rakta Dhatu* may have contributed to reducing disease-related morbidity, improving tissue nourishment, and enhancing overall quality of life.^[12,23-26]

Liv-52 was additionally prescribed to support hepatic function. Since the liver is intimately involved in erythrocyte metabolism and *Ranjaka Pitta* activity, optimization of hepatic function may indirectly improve haematological parameters and systemic metabolism. The combined effect of the treatment regimen resulted in noticeable improvement in appetite, bowel habits, physical strength, body weight, and reduction in recurrent painful episodes.

Overall, the therapeutic protocol demonstrated significant *Deepana*, *Pachana*, *Raktavardhana*, *Raktaposhana*, *Rasayana*, antioxidant, and immunomodulatory effects. Clinically, these translated into reduced fatigue, improved nutritional status, decreased frequency of pain episodes, enhanced

physical activity, and better quality of life in the patient with Sick Cell Anaemia.^[7-13]

CONCLUSION

Sickle Cell Anaemia is a chronic hereditary haemoglobinopathy that may be understood in Ayurveda under the spectrum of *Sahaja Pandu*, resulting from *Beejadushti* and characterized by impaired *Rakta Dhatu* formation, *Agnimandya*, *Tridosha Prakopa*, and progressive *Dhatu Kshaya*. The present case demonstrated that a comprehensive Ayurvedic treatment strategy focusing on *Deepana*, *Pachana*, *Raktavardhana*, *Raktaposhana*, and *Rasayana Chikitsa* can provide substantial symptomatic relief and improve overall wellbeing.

The administration of *Chyavanaprasha*, *Haritaki Churna*, *Aampachaka Vati*, *Punarnava Mandura*, *Dhatri Loha*, *Dadimadi Ghrita*, *Punarnava Amrutadi Granules*, *Raktaposhaka Vati*, Tablet SC-3, Liv-52, Amyron Syrup, and Xerfer Tablets was associated with marked improvement in appetite, body weight, strength, bowel habits, pallor, and day-to-day functional capacity. A reduction in recurrent painful episodes, fatigue, dizziness, and febrile manifestations was also observed during the treatment period. These improvements indicate the potential role of Ayurvedic interventions in enhancing the quality of life of patients suffering from Sick Cell Anaemia.

Although Sick Cell Anaemia remains a lifelong genetic disorder requiring continuous medical supervision, the encouraging outcomes observed in this case suggest that Ayurvedic management may serve as an effective complementary approach in reducing disease burden and improving patient outcomes. Further multicentric clinical studies with larger sample sizes and longer follow-up durations are warranted to validate these findings and establish evidence-based therapeutic protocols.

REFERENCES

1. Stuart MJ, Nagel RL. Sick-cell disease. *Lancet*. 2004; 364(9442): 1343–1360.
2. Balgir RS. The burden of haemoglobinopathies in India and the challenges ahead. *Current Science*. 2000; 79(11): 1536–1547.
3. Nelson Textbook of Pediatrics. 21st Edition. Hemoglobinopathies and Sick Cell Disease.
4. Sushruta Samhita, Sutra Sthana and Sharira Sthana (Adibala Pravritta Vyadhi and Beejadushti concepts).
5. Charak Samhita. Acharya Priyavat Sharma, Marathi Bhashantkar Kale, editors. Varanasi: Chaukhamba Sanskrit Pratishthan; Chikitsa Sthan, Rasayan Adhyaya 1/1/70-72.
6. Agnivesha, Charaka, Dridhabala, Chakrapani. Charaka Samhita. Yadavji Trikamji, editor. Ayurveda Dipika Commentary. Sharira Sthana 4/16. Varanasi: Chaukhamba Prakashana; 2009. p.320.
7. Agnivesha, Charaka, Dridhabala, Chakrapani. Charaka Samhita. Yadavji Trikamji, editor. Sharira Sthana, Mahati Garbhavakranti Adhyaya 4/18. Varanasi: Chaukhamba Prakashana; 2009. p.320.
8. Agnivesha, Charaka, Dridhabala, Chakrapani. Charaka Samhita. Yadavji Trikamji, editor. Sharira Sthana, Mahati Garbhavakranti Adhyaya 4/27. Varanasi: Chaukhamba Prakashana; 2009. p.321.
9. Agnivesha. Charaka Samhita. Sharma RK, Dash B, editors. Vol. 4. Chikitsa Sthana 16/31. Varanasi: Chaukhambha Sanskrit Series; 2005. p.90.
10. Raktaposhaka Vati. Proprietary Ayurvedic formulation used by Sane Guruji Arogya Kendra, Hadapsar, Pune.
11. Yeola G, Dalvi P, et al. A Pilot Study to Evaluate the Efficacy, Safety and Tolerability of Ayurvedic Drugs SC3 and CCRAS Formulation AYUSH-RP in Sick Cell Disease. *Med J West India*. 2013; 4(2): 40–45.
12. Agnivesha. Charaka Samhita. Sharma RK, Dash B, editors. Vol. 2. Chikitsa Sthana, Pandu Chikitsa 16/40. Varanasi: Chaukhambha Sanskrit Series; 2005. p.82.
13. Sharma PV. Dravyaguna Vigyana. Vol. 2. Deepanadi Varga. Varanasi: Chaukhamba Bharati Academy; 2018. p.356.
14. Sharma PV. Dravyaguna Vigyana. Vol. 2. Kasahara Mahakashaya. Varanasi: Chaukhamba Bharati Academy; 2018. p.275.
15. Sharma PV. Dravyaguna Vigyana. Vol. 2. Deepanadi Varga. Varanasi: Chaukhamba Bharati Academy; 2018. p.362.
16. Bhavamishra. Bhavaprakasha Nighantu. Mishra BS, editor. 7th ed. Varanasi: Chaukhamba Sanskrit Bhavan; 1990. p.12–19.
17. Bhavamishra. Bhavaprakasha Nighantu. Mishra BS, editor. Haritakyadi Varga 1/63. Varanasi: Chaukhamba Sanskrit Bhavan; 1990. p.19.
18. Sharma PV. Dravyaguna Vigyana. Vol. 2. Krumighna Mahakashaya. Varanasi: Chaukhamba Bharati Academy; 2018. p.503.
19. Sharma PV. Dravyaguna Vigyana. Vol. 2. Rasayana Mahakashaya. Varanasi: Chaukhamba Bharati Academy; 2018. p.753–755.
20. Pandya M, et al. A Clinical Study on Punarnava Mandura in the Management of Panduroga in Old Age. *AYU*. 2014; 35(3): 252–260.
21. Sastry JLN. Illustrated Dravyaguna Vijnana. Vol. II. 3rd ed. Varanasi: Chaukhambha Orientalia; 2008. p.392.

22. Sharma PV. Dravyaguna Vigyana. Vol. 2. Rasayana Mahakashaya. Varanasi: Chaukhamba Bharati Academy; 2018. p.761.
23. Sharma PV. Dravyaguna Vigyana. Vol. 2. Pleehaghna Mahakashaya. Varanasi: Chaukhamba Bharati Academy; 2018. p.554.
24. Sharma PV. Dravyaguna Vigyana. Vol. 2. Mutravirechaniya Mahakashaya. Varanasi: Chaukhamba Bharati Academy; 2018. p.640.
25. Sharma PV. Dravyaguna Vigyana. Vol. 2. Keshya Mahakashaya. Varanasi: Chaukhamba Bharati Academy; 2018. p.123.

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