



Case Report

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A Case Study On The Management of Beejadushtijanya Pandu (Thalassemia Major) in Children with Gandhakadi Yoga

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ABSTRACT

Introduction: The classical formulations are amended from time to time according to the need of healthy as well as disease conditions. This flexibility has insured its existence until today. Thalassemia is a genetic blood disorder. People with Thalassemia disease are not able to make enough hemoglobin, which causes severe anemia. Hemoglobin is found in red blood cells and carries oxygen to all parts of the body. When there is not enough hemoglobin in the red blood cells, oxygen cannot get to all parts of the body. Organs then become starved for oxygen and are unable to function properly. *Gandhakadi Yoga* is a customized preparation of the formulation proposed for *Loha Sevanajanya Vikara Prashamana* (iron overloading) in *Ayurveda Prakasha*. So in the present study the formulation *Gandhakadi Yoga* has been selected for clinical evaluation on patients of Thalassemia Major, against the standard conventional approach (i.e. Blood Transfusion & Iron chelation therapy). **Aim and Objective:** To evaluate the efficacy of *Gandhakadi Yoga* in the Management of *Beejadushtijanya Pandu* (Thalassemia Major). **Material and Method:** A 4 years old female patient from Jamnagar came in OPD of Kaumarbhritya department IPGT & RA, GAU, Jamnagar. Child was having complains of *Panduta* for 1, *Hridravata* for 1 year, *Daubalya* for 1 year, *Aruchi* for 1 year, *Udarshool* for 7 days. *Gandhakadi Yoga* in 2 divided doses orally with *Sukhoshna Jala* (Luke Warm Water) for 12 weeks, Follow up period 12 weeks. **Result:** *Gandhakadi Yoga* revealed marked improvement in features like *Daubalya*, *Aruchi*, *Udarshool* and Parameters such as Hematological and Biochemical. After 12 weeks of Follow up no any adverse effect during the course of study. **Conclusion:** This case study revealed that *Gandhakadi Yoga* is effective in *Beejadushtijanya Pandu* (Thalassemia Major). Marked improvement found in Subjective and Objective Parameters.

Keywords: *Beejadushtijanya Pandu*, Thalassemia Major, *Gandhakadi Yoga*.

INTRODUCTION

Thalassemia occurs across the globe, but is most prevalent among the Italian, Greek, Mediterranean region, Southeast Asians, Chinese, Indians, Egyptians, Middle Easterners, Romanians, Bulgarians and African descent. Thalassemia Major prevalence rates in states of India like Maharashtra, Gujarat, West Bengal, Assam, Karnataka and Punjab are above the national level. [1] Children born with Thalassemia major usually develop severe anemia, ineffective erythropoiesis, jaundice and Haemosiderosis, which result in greenish brown complexion. In Thalassemia, patient suffers from retarded physical growth, poor feed, Hepatosplenomegaly, irregular fever due to increased metabolic activity or in recurrent infection. Increased nutrition demand results in cachexia, fatigue, bony abnormalities etc. [2] *Gandhakadi Yoga* is a customized preparation of the formulation proposed for *Loha Sevanajanya Vikara Prashamana* (iron overloading) in *Ayurveda Prakasha*. [3] A disease similar to Thalassemia is not found as such described in *Ayurveda*, but may be correlated with *Beejadushtijanya*, *Adibala pravrittha* and *Sahaja vyadhi* and nomenclature was coined as *Beejadushtijanya Pandu*. It is also mentioned in *Ayurvedic* classics that *Tulya Gotra Vivaha* should not be done. [4] The reason for it is presumed that *Tulya Gotra Vivaha* (Consanguineous marriages) will increase the chances of genetic and hereditary disorders. It can be understood that *Pitta Pradhana Tridosha* affect the functions of *Raktavaha Srotasa* and ultimately the process of formation of *Rakta Dhatu* is affected and produce *Raktavikriti*. Persistent production of *Vikrita Rakta Dhatu* leads to various symptoms in the form of *Tridoshajanya Pandu*.

CASE REPORT

A 4 years old female patient from Jamnagar came in OPD of Kaumarbhritya department IPGT & RA, GAU, Jamnagar. Child was belonging to lower class family having complains of *Panduta* for 1, *Hridravata* for 1 year

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Aruchi for 1 year, *Udarashool* for 7 days. She has given BT more than 50 times. Age of diagnosis less than 1 year. She was taking chelating Desirox 250 mg.

On examination

Ht.- 100 cm Wt.- 14.5 kg BMI – 14.5 kg Head circumference- 48 cm chest circumference- 46 cm M.U.A.C.- 26 cm P.A.- 32 cm, Vitals was stable with Temp. -98.6°F P.R.- 70/min, R.R.- 22/min, H.R.- 74/min. Also, Physical and mental disposition was normal.

Personal History-

Appetite – Poor; Sleep – Normal; Bowel – 2 times per day; Urine – 4 times per day and 2 times per Night

Table 1: *Gandhakadi Yoga* [6]

S. No	Ingredient	English/Latin name	Part used	Quantity
1.	<i>Shuddha Gandhaka</i>	Sulphur	–	1 part
2.	<i>Vidanga</i> [6]	<i>Embelia ribes</i> Burm.f.	Dry Fruit	1 part
3.	<i>Agastya Patra</i> [7]	<i>Sesbaniya grandifoliya</i> Linn.	Green Leaves	Q.S. for <i>Bhavana</i>
4	<i>Shigru Patra</i>	<i>Moringa Oleifera</i> Lam.	Green Leaves	Q.S. for <i>Bhavana</i>

Subjective Criteria for assessment:

- a. *Panduta* (Pallor)
- b. *Hridhravatva* (Palpitation)
- c. *Daurbalya* (Weakness)
- d. *Balakshaya* (Chronic Fatigue)
- e. *Akshikootashotha* (Puffiness around the Orbit)
- f. *Jwara* (Fever)
- g. *Aruchi* (Anorexia)
- h. *Udarashoola* (Abdominal Pain)

- i. *Pleehaavridhi* (Splenomegaly)
- j. *Yakritvridhi* (Hepatomegaly)
- k. *Atisara* (Loose Motion)
- l. *Pindikodweshtana* (Leg cramps)
- m. *Sandhishoola* (Arthralgia).

Objective Criteria for assessment-

Routine hematological investigations were performed along with biochemical investigations for assessment of liver function and iron overload.

RESULTS

Table 1: Effect of therapy on Subjective Parameters

Parameter	Before Treatment	After Treatment
<i>Panduta</i>	Grade 1	Grade 1
<i>Hridhravatva</i>	Grade 1	Grade 1
<i>Daurbalya</i>	Grade 2	Grade 1
<i>Aruchi</i>	Grade 1	Grade 0
<i>Udarashoola</i>	Grade 2	Grade 0

- *Daurbalya* – Mild Improvement
- *Aruchi* - Improvement.
- *Udarashoola* - Improvement.
- Showed better improvement in parameters like *Daurbalya*, *Aruchi*, *Udarashoola*
- Appetite increased.
- Body wt. increased for 1 kg and P.A. decreased 2 cm
- Ht.- 100.5 cm Wt.- 15.5 kg BMI – 15.42 kg Head circumference- 48 cm chest circumference- 46 cm M.U.A.C.- 26 cm P.A.- 30 cm
- BMI- 15.42

Table 2: Effect of therapy on Objective Parameters

Parameter	Before Treatment	After Treatment	% Improvement
HB	11	11.5	4.54%
Sr. Iron	196	184	6.12%
Sr. TIBC	281	288	2.49%
Sr. Ferritin	1140	491	56.92%

On Investigations (Hematological, Biochemical)

- HB has increased from 11 gm./dl to 11.5 gm./dl
- Serum Ferritin was reduced from 1140 nag/ml to 491 nag/ml
- Serum TIBC has increased from 281mcg/dl to 288mcg/dl
- Results showed improvement in HB, Serum TIBC, and Serum Ferritin
- During 12 weeks of Follow up no any ADR Reported.

DISCUSSION

As the *Acharyas* have clearly mentioned in the texts, without the “*Tarka* and *Yukti*” one could not get the principle theme of the work [9]. The ingredients of *Gandhakadi Yoga* have properties like *Aamapaachana*, *Deepana*, *Pandughna*, *Jwaraghna*, *Vishagna*, and *Rasayana* properties relieve the signs and symptoms of Thalassemia Major. Iron chelation done through *Lohamaarana*, *Lohadravaka*, *Lohasevanajanya* *Vikara Prashamana* properties of the drug. *Raktashadhana*, *Krimighna*, and *Raktaprasadana* properties decrease the rapid destruction of RBCs and thus prolonging the Life span of RBCs, which increases the BT interval.

Gandhakadi Yoga helps to decrease iron overload from body, normalize iron metabolism, prolong RBCs lifespan, relieve signs and symptoms of the disease, increase BT interval. All these factors increase the expectancy of good life as well as improve quality of life of Thalassemic patients.

In spite of *ushna veerya* drugs as major ingredients of *Gandhakadi Yoga* and long duration (12 weeks) of treatment, there was the patient reported no any adverse effect during the course of study.

CONCLUSION

Thalassemia is a malignant type of genetic disorder affecting millions of people worldwide. Death of the patients is usually due to iron overload, attack of secondary infections and transfusion transmitted diseases. If corrective steps are not taken, the disease will burden the world’s blood bank supplies and health system in general.

After analysis of all data, it is concluded that *Gandhakadi Yoga* is effective in treating this case study of *Beejadushtijanya Pandu* (Thalassemia Major) in Children and gives relief to the patient. There were no adverse effects found during the Ayurvedic medication.

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