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 yaer, 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 Beejadushjanya, Adibala pravritha and Sahaja vyadhik and nomenclature was coined as Beejadushjanya 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 Raktak Dhatu is affected and produce Raktvikriti. 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.
Aruchi for 1 year, Udarshool 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 – 15.4 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]

<table>
<thead>
<tr>
<th>S. No</th>
<th>Ingredient</th>
<th>English/Latin name</th>
<th>Part used</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Shuddha Gandhaka</td>
<td>Sulphur</td>
<td>_</td>
<td>1 part</td>
</tr>
<tr>
<td>2.</td>
<td>Vidanga[6]</td>
<td>Embelia ribes Burm. f.</td>
<td>Dry Fruit</td>
<td>1 part</td>
</tr>
<tr>
<td>4.</td>
<td>Shigru Patra</td>
<td>Moringa Oleifera Lam.</td>
<td>Green Leaves</td>
<td>Q.S. for Bhavana</td>
</tr>
</tbody>
</table>

Subjective Criteria for assessment:

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

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Before Treatment</th>
<th>After Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panduta</td>
<td>Grade 1</td>
<td>Grade 1</td>
</tr>
<tr>
<td>Hridravatva</td>
<td>Grade 1</td>
<td>Grade 1</td>
</tr>
<tr>
<td>Daurbalya</td>
<td>Grade 2</td>
<td>Grade 1</td>
</tr>
<tr>
<td>Aruchi</td>
<td>Grade 1</td>
<td>Grade 0</td>
</tr>
<tr>
<td>Udarashoola</td>
<td>Grade 2</td>
<td>Grade 0</td>
</tr>
</tbody>
</table>

➢ 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

Birth History-

Full Term Normal Delivery at Hospital, Cried soon after birth, Birth weight- 3.3 kg.

No H/O- NICU Admission

Immunization History & Growth and Development- Proper till date.

MATERIAL & METHODS

Drug: - Gandhakadi Yoga 1 gm/ Day[6] in 2 divided doses orally with Sukhoshna Jala (Luke Warm Water) (Dose calculated according to Young’s Formula for 12 weeks, Follow up period 12 weeks.)
Table 2: Effect of therapy on Objective Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Before Treatment</th>
<th>After Treatment</th>
<th>% Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>HB</td>
<td>11</td>
<td>11.5</td>
<td>4.54%</td>
</tr>
<tr>
<td>Sr. Iron</td>
<td>196</td>
<td>184</td>
<td>6.12%</td>
</tr>
<tr>
<td>Sr. TIBC</td>
<td>281</td>
<td>288</td>
<td>2.49%</td>
</tr>
<tr>
<td>Sr. Ferritin</td>
<td>1140</td>
<td>491</td>
<td>56.92%</td>
</tr>
</tbody>
</table>

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, Iwaraghna, 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. Raktaadhodhana, Krimagha, and Raktaprasaadana 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 Beejadushthijanya Pandu (Thalassemia Major) in Children with Gandhakadi Yoga. There were no adverse effects found during the Ayurvedic medication.

Acknowledgments

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REFERENCES

2. www.Thalassemia- wikipedia.org retrieved on date 2/04/2019,11:00 am

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