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Ayurvedic management of Idiopathic Thrombocytopenia Purpura - A Case Study

Chaithra T M¹, Prashanth A S²

¹Post Graduate Scholar, Dept. of Kayachikitsa, Ayurveda Mahavidyalaya and Hospital, Hubballi, Karnataka, India.

²Professor, Dept. of Kayachikitsa, Ayurveda Mahavidyalaya and Hospital, Hubballi, Karnataka, India.

ABSTRACT

The traditional *Ayurvedic* literature includes a thorough grasp of effective treatment to a majority of Modern-day health issues. Idiopathic Thrombocytopenic purpura (ITP) is one of these issues that is strengthening its roots in society. ITP is an Autoimmune disorder characterized by a low platelet count and mucocutaneous bleeding. ITP is defined as a Hematologic disorder, characterized by isolated thrombocytopenia without a clinically apparent cause. The major causes of accelerated platelet destruction include Immune thrombocytopenia, Decreased bone marrow production and increased splenic sequestration. Bleeding disorders are explained in classics under the heading of *Raktapitta*. ITP can be correlated with *Tiryaka Raktapitta*. It is *Pitta pradhana tridoshaja vyadhi* and it manifests as subcutaneous bleeding. In this study, a 21 year old female patient had complaints of Epistaxis, purpura, petechia, bruises since 6 months and she was treated with ayurvedic medicines. After treatment significant improvement was observed in patient's condition, Haematological parameters i.e, Platelet count was stable.

Key words: Idiopathic Thrombocytopenia Purpura, *Tiryak Raktapitta*, *Mrudu Virechana*, *Parisheka*.

INTRODUCTION

According to *Acharya Vagbhata*, the excessive consumption of *Ushna*, *Tikshna*, *Katu*, and *Lavana Rasa Ahara* the *Pitta* gets vitiated.^[1] In this disease *Pitta Pradhana Vata* and *Kapha* are vitiated resulting in the imbalance of the *Rakta Dhatu*. This vitiated *Pitta* associates with *Rakta* and causes *Raktapitta*. Further vitiated *Rakta* flows out from all orifices including *Romakupa* (hair follicles) it is called as *Tiryak Gata Raktapitta*. *Tiryakgata Raktapitta* is the *Pitta Pradhana Vyadhi* and it were get converted into *Pitta*

Pradhana Tridoshaja Vyadhi, as a rule any disease will get transformed into *Sannipataja* in an advance stage of it. As because of its severity it is considered as *Mahagada*.

Immune thrombocytopenic purpura (ITP), also known as Idiopathic thrombocytopenic purpura or Immune thrombocytopenia, is a type of thrombocytopenic purpura characterized by a low platelet count and accompanied by a red-purple rash called purpura.^{[2],[3]} It leads to an increased risk of bleeding.^[2] It is an autoimmune bleeding disorder in which the immune system attacks the platelets in the blood. This imbalance affects the immune system of the body with manifestations like subcutaneous bleeding-Based on this definition of ITP, it can be correlated to *Tiryakgata Raktapitta* in *Ayurveda*.

Address for correspondence:

Dr. Chaithra T M

Post Graduate Scholar, Dept. of Kayachikitsa, Ayurveda Mahavidyalaya and Hospital, Hubballi, Karnataka, India.

E-mail: drchaithra238@gmail.com

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Pathology

Platelets are cells in the blood that help to stop the bleeding. Decrease in platelets can cause easy bruising, bleeding gums, and internal bleeding. In approximately 60 percent of cases, antibodies against platelets can be detected.^[4] Most often these antibodies are against

platelet membrane glycoproteins IIb-IIIa or Ib-IX, and are of the immunoglobulin G (IgG) type. The coating of platelets with IgG renders them susceptible to opsonization and phagocytosis by splenic macrophages, as well by Kupffer cells in the liver. The IgG auto-antibodies also damage megakaryocytes, the precursor cells to platelets. Although this is believed to contribute a minor to the decrease in the platelet count. The recent research now indicates that impaired production of the glycoprotein hormone, thrombopoietin, which is the stimulant for platelet production, may be a contributing factor to the reduction in circulating platelets. The stimulus for auto-antibody production in ITP is probably abnormal T cell activity. Preliminary findings suggest that these T cells can be influenced by medications that target B cells, such as rituximab.

Signs and Symptoms

Signs of ITP include,

- Spontaneous formation of Bruises (purpura) and Petechiae (tiny bruises), especially on the extremities.
- Bleeding from the nostrils and/or gums, as well as menorrhagia (excessive menstrual bleeding), may occur if the platelet count falls below 20,000 per μl .^[5]
- The platelet count below 10,000 per μl lead to the spontaneous formation of Hematomas (blood masses) in the mouth or on other mucous membranes. Furthermore, the bleeding time from minor lacerations or abrasions is usually prolonged.
- In cases where platelet counts drop to extremely low levels (<5,000 per μl), serious and potentially fatal complications may arise. These complications include Subarachnoid or Intracerebral Haemorrhage, lower gastrointestinal bleeding or other internal bleeding.
- A person with ITP with an extremely low platelet count is susceptible for internal bleeding resulting from blunt Abdominal Trauma, such as in a motor vehicle crash. These complications are unlikely to

occur when the platelet count is less than 20,000 per μl .^[6]

CASE REPORT

Primary data

A 21 year old female patient visited Kaya Chikitsa OPD of Ayurveda Mahavidyalaya & Hospital, Hubli on date 26/09/2022 with following details.

Patient name - ABC

Age/Sex - 21 years/ Female

Occupation - House Wife

Place - Hubballi

Chief complaints

- Patient complained of Bruises after being struck by any object
- Occasionally nasal bleeding since 6 months.

Associated complaints

- Weakness
- Generalised body ache
- Reduced appetite
- Hair fall since 6 months.

History of present illness

A 21year old female patient visited to the Kayachikitsa OPD of Ayurveda Mahavidyalaya College and Hospital, Hubballi. Who was apparently normal before 6 months. Since then, she had complaints of bruises after being struck by any object, nasal bleeding occasionally, weakness, generalised body ache, reduced appetite and hair fall. Patient underwent allopathic treatment and didn't get symptomatic relief. Hence patient visited to our hospital for Ayurvedic treatment.

Personal history

Appetite: Reduced

Bowel: Regular

Micturition: Regular

Sleep: Normal

Food: Mixed food habits

Menstrual history: post-partum status from 6 months.

Obstetrics history: P₁ L₁ D₀ LSCS, Male, 6 months.

General examination

BP: 140/80 mm of hg

Pulse: 68/ min

RR: 20/ min

Temp: 96.6 F / Afebrile

Pallor: Present

Oedema: Absent

Nails: Normal

Tongue: Dry, Redness+

Weight: 40 kg

Systemic examination

R/S: NVBS, Clear

CVS: S₁S₂ Heard

CNS: Conscious, Oriented

P/A: Soft, Nontender, No distension.

Nidana Panchaka

Nidana

Excessive intake of *Ushna* (hot), *Amla* (sour), *Tikshna* (sharp), *Vidahi* (corrosive food), *Kshara* (alkali) food items, *Atikrodha* (excessive anger), *Atiatapa Sevana* (exposure to the sun), *Ativyayama*.

Poorva Roopa

Shokha Purna Galasyata, Aruchi, Ura Vidaha, Amla Udgara, Sheeta Kamitva, Klama, Chardi, Loha Gandhi Nishwasa.

Roopa

Sarvanga Dahatva Nasagata Raktastrava, Jwara, Shuka Purna Galasyata, Chardi, Amla Udgara, Klama, Aruchi.

Samprapti

Due to *Nidana Sevana*



Pitta gets aggravated, then mixes with the *Rakta* and in turn vitiates the *Rakta*



Due to the *Ushna Guna* of the *Pitta Dosha*, the *Drava Tatwa* of other *Dhatu*s like *Mamsa, Meda* etc. oozes out of their respective tissue and gets mixed with the *Rakta*.



This enhances the quantity of the *Rakta Dhatu*, beyond the normal limits



This also enhances the quantity of blood flowing in the blood vessels creating immense pressure in the blood vessels



Due to the pressure of the Blood and *Ushmata* of the *Pitta*, the walls of the blood vessels get damaged and the blood starts flowing through the various openings of the body.



Rakta Srava will occur through Mouth, Nose, Ears, Eyes, Skin, Anus, Penis and Vagina (*Navadwara*)



This bleeding of blood vitiated by *pitta* through various orifices (*Navadwara*) of the body is called as *Raktapitta*.

Samprapti Ghatakas

Dosha: Pitta Pradhana Tridoshaja

Vata: Samana, Apana, Vyana

Pitta: Pachaka, Ranjaka

Kapha: Kledaka

Dushya: Rakta, Rasa, Mamsa, Sira

Agni: Jataragni, Dhatvagni, Bhutagni

Agnidusti: Agniviparyaya

Aama: Kosta Agnijanya

Srotas: Raktavaha, Rasavaha, Annavaha, Artava and other Srotas according to Avastha.

Srotodusti: Sanga, Vimarga Gamana, Atipravrutti

Udbhavasthana: Amapakwashaya

Sancharasthana: Raktavahinyaka, Rasavahinyaka

Adhistana: Yakruith and Pliha

Vyaktasthana: Tiryaka Bahya Srotas

Rogamarga: Bahya and Abhyantara

Sadhyasadyata: Ekadosha - Sadhya

Dvidosha - Yanya

Sannipataja - Asadhyas

Svabhava - Ashukari, Chirakari

Diagnostic criteria

CBC mainly Platelet count

BT, CT, Sr. Calcium

Treatment protocol

- On 1st day of OPD visit the following *Shamanoushadhi* were advised for 15 days,
 1. *Laghu Sutashekhara Rasa* 1-0-1, B/F
 2. *Sudarshana Ghana vati* 1-0-1, B/F
 3. Tab. Styplon 1-1-0, A/F
 4. Tab. Platenza 1-0-1, A/F
- After 15 days, patient got admitted with mild reduction in the symptoms. As condition of the patient was in *Bahudoshaja Avastha*, *Panchakarma* therapy was advised.
- In the beginning *Manjistadi Kashaya* and *Aragvadamrita Kashaya Parishekha* for 5 days followed by 7 days of *Vishrama Kala* was advised.
- After 7 days of resting period the patient was admitted again and was advised the *Mrudu Virechana* therapy as follows.

Procedure	Medicine	Duration	Dosage
<i>Vicharana Snehapana</i>	<i>Indukanta Ghritam</i>	5 days	15 ml with food BD
<i>Mrudu Virechana</i>	Cap <i>Nimbamrutadi Erandam</i>	1 day	1-0-1, B/F
<i>Mrudu Virechana</i>	<i>Manibadra Lehya</i>	1 day	20gm at 7:00 am in the morning

- After intake of *Manibadra Lehya* for *Virechana*, 5 *Vegas* were observed.
- Patient got discharged and was advised for *Pathya Apathya* and *Shamana Oushadhis* were are continued.

▪ *Shamanoushadhi* as:

Cap *Narasimha Rasyana* 1-0-1, B/F

Laghusutashekhara Vati 1-0-1, B/F

Sudarshana Ghana Vati 1-0-1, B/F

Tab. Styplon 1-1-0, A/F

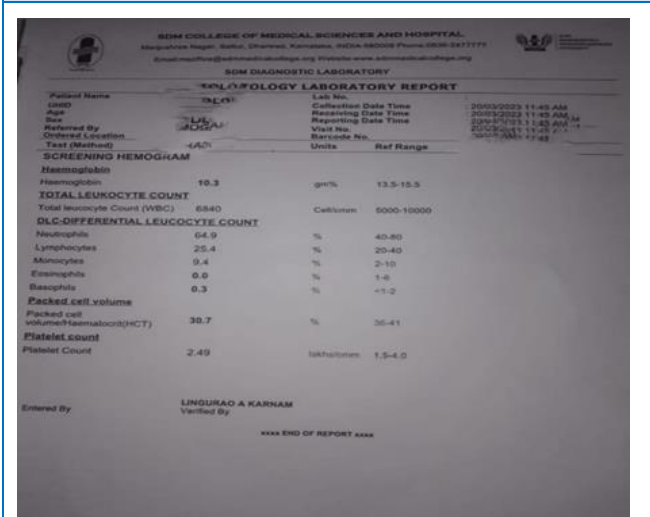
Tab. Platenza 1-0-1, A/F

▪ Follow-up details

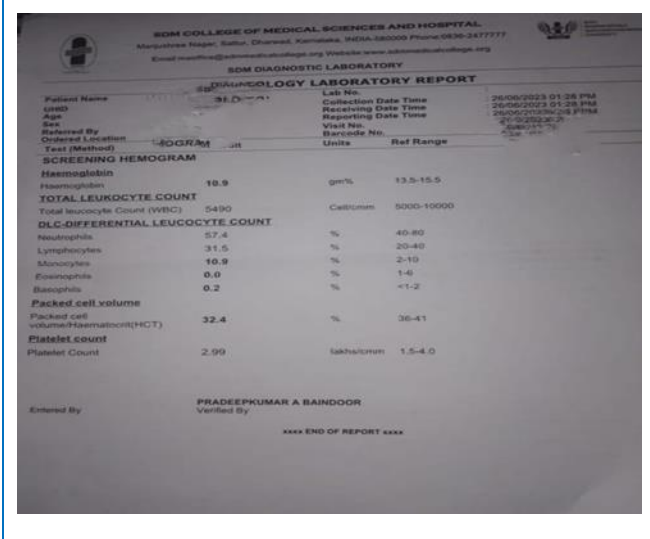
Complaints	<i>Shamanaoushadhis</i>
1st follow up (7/2/2023)	
<ul style="list-style-type: none"> ▪ Headache ▪ Occurrence of Bruises were reduced ▪ Normal menstrual cycles were attained. 	<ol style="list-style-type: none"> 1. <i>Laghusutashekhara Vati</i> 1-0-1, A/F 2. <i>Sarivadyasava</i> 15 ml -0-15 ml, with 45ml luke warm water, A/F 3. <i>Drakshasava</i> 15ml -0- 15 ml, with 45ml luke warm water, A/F 4. Tab. Platenza 1-0-1, A/F 5. Tab. <i>Sudarshana Ghana Vati</i> 1-1-0, B/F 6. Tab. Heap ok 0-1-0, B/F 7. <i>Dadimastaka Churna</i>, B/F 1 tsf -0-1 tsf with luke warm water 8. Tab. Liv 52 DS 1-0-1, A/F

<p>2nd follow up (17/5/2023)</p> <ul style="list-style-type: none"> Headache Vomiting after intake of sour substance Burning sensation of the bilateral feet ++ 	<ol style="list-style-type: none"> Laghusutashekhara Vati 1-0-1, B/F Tab. Ulsant 1-1-1, B/F Amlapittantaka syp 2 tsf -0-2tsf with 45 ml water, B/F Tab. Platenza 1-0-1, A/F Tab. Hepa ok 0-1-0, A/F Tab. Thyrowave 0-0-1, B/F
<p>3rd follow up (28/6/2023)</p> <ul style="list-style-type: none"> Patient had no complaints of burning sensation, bruises. Patients felt better. 	<ol style="list-style-type: none"> Syp. Stomaliv 2 tsf -0- 2tsf with 45 ml water, B/F Amlapittantaka syp 2tsf -0-2 tsf with 45 ml water, B/F Tab. Platenza 1-0-1, A/F Tab. Hepa ok 0-1-0, A/F Tab. Throwwave 0-0-1, B/F

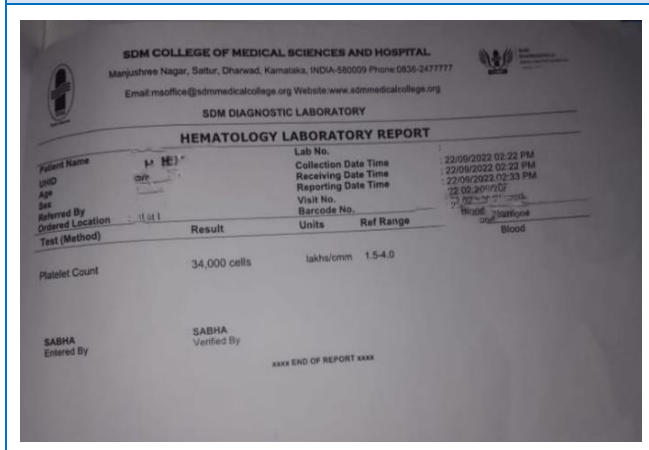
After the first follow-up (20/03/2022)



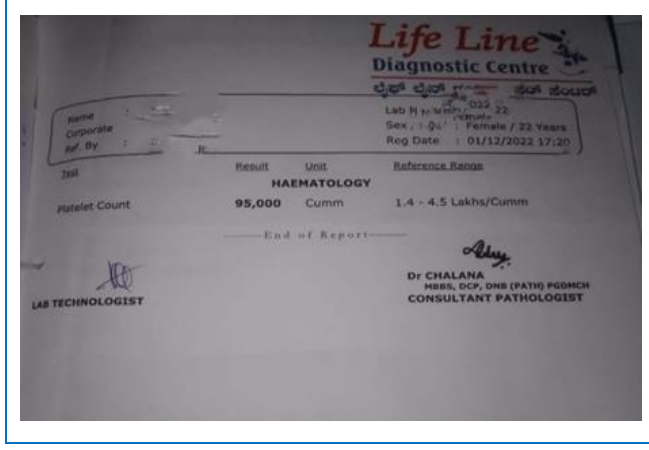
After the second follow-up (26/06/2023)



Before treatment (22/09/2022)



After Panchakarma (1/12/2022)



RESULTS

A significant, marked elevation in the level of platelet count are observed during the treatment period and consecutive follow-up. After the treatment, symptoms markedly reduced. The patient was advised to attend the follow-up, medication were advised and instructed to follow the *Pathya*.

DISCUSSION

The disease Thrombocytopenia can be correlated with the *Tiryak Gata Raktapitta*. By appropriate understanding of *Nidana, Samprapti, Laxana, Rogi* and *Roga Bala, Roga Avastha* the disease is addressed by

adapting multi- modality treatment procedures like *Mrudu Virechana, Shamana Oushadhi Prayoga*.

The mode of action of procedure and drugs are as follows:

Laghu Sutashekhara Rasa^[7] is given which contains *Shudha Swarna Gairika, Shunti Choorna Bhavana* with *Nagavalli Swarasa*. Which helps in the reduction of the *Ama* and prevents its further formation through its *Pachana* effect. It especially reduces the *Pitta* and its *Gunas* like *Tikshna & Amla Guna*. As the *Raktapitta* is having *Pitta* predominance, this *Yoga* can be used here.

Sudarshana Ghana Vati^[8] which is having the *Pitta Rechaka*, Hepatoprotective, which influence over the spleen which is the destructor of RBC cells, as it possesses the *Amla Guna Pradhan Dravyas* in it.

Tab styplon will acts as an Haemostatic drugs

Tab Platenza is having Hepatoprotective, it acts as Catalyser for the drugs, decreases the platelet destruction.

Parishekha, as the patient is Lactating women we can't do the procedures which are strainfull, so *Parisheka* has been done. It is very helpful as fire gets extinguished by pouring water, similarly the symptoms like *Daha, Dourbalya* is reduced by the process of *Parishekha*.

Cap Narasimha Rasayana^[9] due to its *Rasayana* action it is helpful in *Pittashaman* which is very useful, as the immunity is low in *Raktapitta* patients.

Vicharana Snehapana, as the patient is *Sneha Dweshi*, having *Mrudu Kostha*, more of *Roga Bala Vicharana Snehapana* has been done with *Indukantha Ghritam* which is having the *Gunas* like *Agni Uttejana* and *Muda Vata Anulomana*.

Mrudu Virechana, As the *Rogi Bala* is less, so *Mrudu Virechana* is given to patient. It does the *Pitta Rechana* which is useful in the *Raktapitta*.

It is conducted with **Nimbamrutadi Erandam**^[10] and **Manibadra Lehyam**^[11] which are helpful in the Splenic disorders. Those which are acting on the *Raktavaha Sroto Mula Yakrit* and *Pleeha*.

Sarivadyasyava^[12] and **Drakshasava**^[13] they are indicated in *Rakta Prasadana, Pitta Shamana*. These preparations are endowed with antioxidant, antimicrobial, anti-inflammatory properties.

Dadimastaka Choorna^[14] it helps in the *Agni Sandeepana, Arochakahara, Rakta Vardaka, Muda Vata Anulomana*.

Tab Liv 52, it is a popular, Restorative Pharmaceutical preparation which is Hepatoprotective, Appetizer, Improves the digestion process. It helps in Restoring the livers functional efficiency by protecting the Parenchyma and Hepatocellular Regeneration.

Amlapittantaka Syp, Syp Stomaliv, Tab Ulsant are used to reduce the *Amlapitta*, and it is Digestive and Carminative.

Tab. Hepa OK, it acts as an natural liver tonic that eliminates the toxins, powerful Antioxidant, Anti-Inflammatory, Antimicrobial, Antiviral, Hepatoprotective, Immune booster.

Tab Thyrowave, it is given because the patient is known case of Hyperthyroidism.

CONCLUSION

Raktapitta, a *Mahagada*, its severity depends upon the cause and the amount of blood loss; assessed clinically (pallor pulse, BP, blood loss, etc.). When this disease changes its *Marga* (direction), it turns *Asadhya* (incurable), having grave consequences. So, it should be treated immediately, before it spreads like a forest fire. In this clinical case study, the patient has shown good improvement symptomatically during the management of the ITP. Chronic ITP needs lifelong medical management or splenectomy. With the help of Ayurvedic formulations, the patient is relived from symptoms. The drug which is used in the management of ITP possesses the properties of antioxidant, immunomodulatory, antimicrobial, hepatoprotective and anti-inflammatory. These properties of drugs prevent platelet destruction by the immunological process. Thus, the Improvement was observed in the symptoms of petechial hemorrhage, nasal bleeding, general weakness and body ache.

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