

Ayurveda's Role in Managing ITP: A Case Study

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Abstract:

ITP (Immune thrombocytopenic purpura) is an autoimmune disorder where the immune system mistakenly attacks the platelets leading to the low platelet levels. ITP may occur in the absence of a predisposing cause (primary ITP) or due to a growing list of associated conditions (secondary ITP), and must be differentiated from other causes of thrombocytopenia. ITP can be acute and chronic. It can cause purple bruises and tiny purple red dots on the skin that looks like a rash. Modern medicine has no effective treatment for ITP. A 26 year old female patient presented with the complaints of bruises, nose bleeding, heavy menstruation, pain in left leg and irritability. The clinical findings and symptoms of the patient pointed to ITP. It is associated with Tiryagata Raktapitta in Ayurvedic diagnosis. The patient was given Platoplan along with Kumar Kalyan Ras, Swarn Vasant Malti Ras, Pitta Balance. After a month, the patient reported relief in some of the symptoms. Platelet count increased from 41,000 to 1,89,000. After completing the medications the most common problem of low platelets reduced.

Keywords: ITP, Tirayka Raktapitta, Platoplan capsules, Kumar Kalyan Ras, Swarn Vasant Malti Ras, Pitta Balance, Platelet count

Introduction:

Immune thrombocytopenic purpura (ITP) is a condition in which the body's immune system mistakenly attacks and destroys platelets, resulting in a low platelet count. This causes purpura to develop on the skin and may cause bleeding due to the presence of antibodies that target platelets and damage them. Ruling out the usual suspects helps identify the underlying causes of thrombocytopenia. The diagnosis of immune thrombocytopenia (ITP) depends on clinical suspicion and the presence of thrombocytopenia, as indicated on a normal peripheral smear. The bone marrow is examined to rule out the possibility of leukaemia, myelodysplastic syndrome or aplastic anaemia. Circulating platelets become sensitised due to the presence of IgG autoantibodies.

There are mainly three forms of ITP:

- A. Primary ITP:** It is an acquired ITP due to autoimmune mechanisms leading to platelet destruction and platelet under production that is not triggered by an association condition.
- B. Secondary ITP:** It is an ITP associated with other conditions such as HCV, SLE, etc.
- C. Drug-Induced Immune Thrombocytopenia:** Drug induced immune thrombocytopenia (DITP) is thrombocytopenia due to drug dependent platelet antibodies that cause platelet destruction.

The incidence of ITP in adults is estimated to be approximately 1.6 to 3.9 per 100,000 persons per year,

and depending on the diagnosis code, range from 9.5 to 23.6 per 100,000 persons. The recommended treatment options for ITP include

- A.** First line of treatment (for initial treatment of newly diagnosed) is corticosteroids such as dexamethasone, prednisolone, IVIG.
- B.** corticosteroids and pituitary gonadotropin inhibitors such as dapsone and TPO receptor agonists (Romiplostim and Eltrombopag) **c.)** TPO receptor agonists, Campath- 1 H- combination of first and second line therapies, combination chemotherapy and HSCT.

Corticosteroids have adverse effects, such as ecchymosis, skin thinning and atrophy, acne, mild hirsutism, facial redness, streaks, impaired wound healing, thinning of hair, and perioral dermatitis. Ayurveda places great emphasis on prevention and encourages the maintenance of health through close attention to balance in the diet, lifestyle and the use of herbs. The knowledge of Ayurveda enables a person to understand how to create this balance of body, mind and consciousness according to his or her individual constitution and what lifestyle changes to make to bring about and maintain this balance.

In Ayurveda ITP can be linked to a disease called Raktapitta. Raktapitta is a bleeding disorder caused by the deterioration of Rakta (blood) and Pitta (heat energy in the body). Raktapitta is classified into three groups, namely Urdhvagata, Adhogata and Tiriyagata. ITP falls under the ambit of Tiriyagata Raktapitta and is considered Yasya disease. Raktapitta is a broad term that includes various bleeding disorders, such as epistaxis, menorrhagia, hematuria, etc. Pitta is contaminated with Ushna (hot), Tikshna (pungent) dominant dietary habits and activities that create excessive heat in the body. Vitiated Pitta further contaminates the blood and leads to the manifestation of Raktapitta. Raktapitta disease mainly affects the blood vessels (Raktavaha srotas) and eventually causes bleeding from various sites. The diagnosis of Raktapitta depends on the dosha involved, the track involved in the bleeding, severity and strength of the patient. Both Shamana (Pacifying) and Shodhana Chikitsa (purification therapy) have been mentioned for Raktapitta and these should be applied by considering various factors like age of the patient, comorbidities, physical strength, season etc. Tiriyagata Raktapitta is a Tridoshaj (three fluids of the body) disease in which bleeding occurs in the skin pores.

Table 1. Similarities between ITP and Tirayagata Raktapitta

ITP	Raktapitta
Bruising	Reddish, greenish, bluish discoloration of body
Bleeding from nose, gums, and menstruation	Bleeding from all the orifices
Body Pain	Anga Vedna
Tiredness	Gatra sadan
Fatigue	Klam

Case study

On 20 April 2022, the patient had seen red marks on her body and went for a CBC count just to check for any abnormality. As per the results of CBC report the platelet count of the patient was low i.e 15000. Then they got admitted to a local hospital in Sangrur, Punjab for 3 days and Infused platelet infusion. The

doctors referred them to PGI, Chandigarh. After that the patient visited PGI doctors in their OPD. They asked the patient to get admitted as the count was 3000 at that time. Then the patient was admitted in PGI and infused IVIG, The count after the injection was 40000. The doctors did a Bone marrow test and the patient was diagnosed with ITP. After 6 days of IV treatment the patient was discharged from the hospital with an Oral dose of Wysolone-50 mg. They continued the Wysolone for 8 months and decreased the dosage gradually and stopped the medication as per the doctor's advice. After 1 month the patient had nose bleeding and red spots on their body, they took online consultation with an allopathic doctor and again started the steroid but the count was 1000 on 2 dec 2022. Then they visited the Planet Ayurveda on 5 Dec 2022 and consulted Dr. Vikram Chauhan at Planet Ayurveda Mohali with 41000 Platelet count done on 4 Dec 2022.

Diet History: The patient's dietary history reveals that she consumes buttermilk daily at lunch and takes junk food, oily food two to three times per week. The patient had a daily practice of napping for an hour after eating.

Drug History: The patient had no history of any major medical conditions. Menstrual history reveals that she had heavy bleeding during menstruation

Family History: The patient's family had no history of ITP.

Findings:

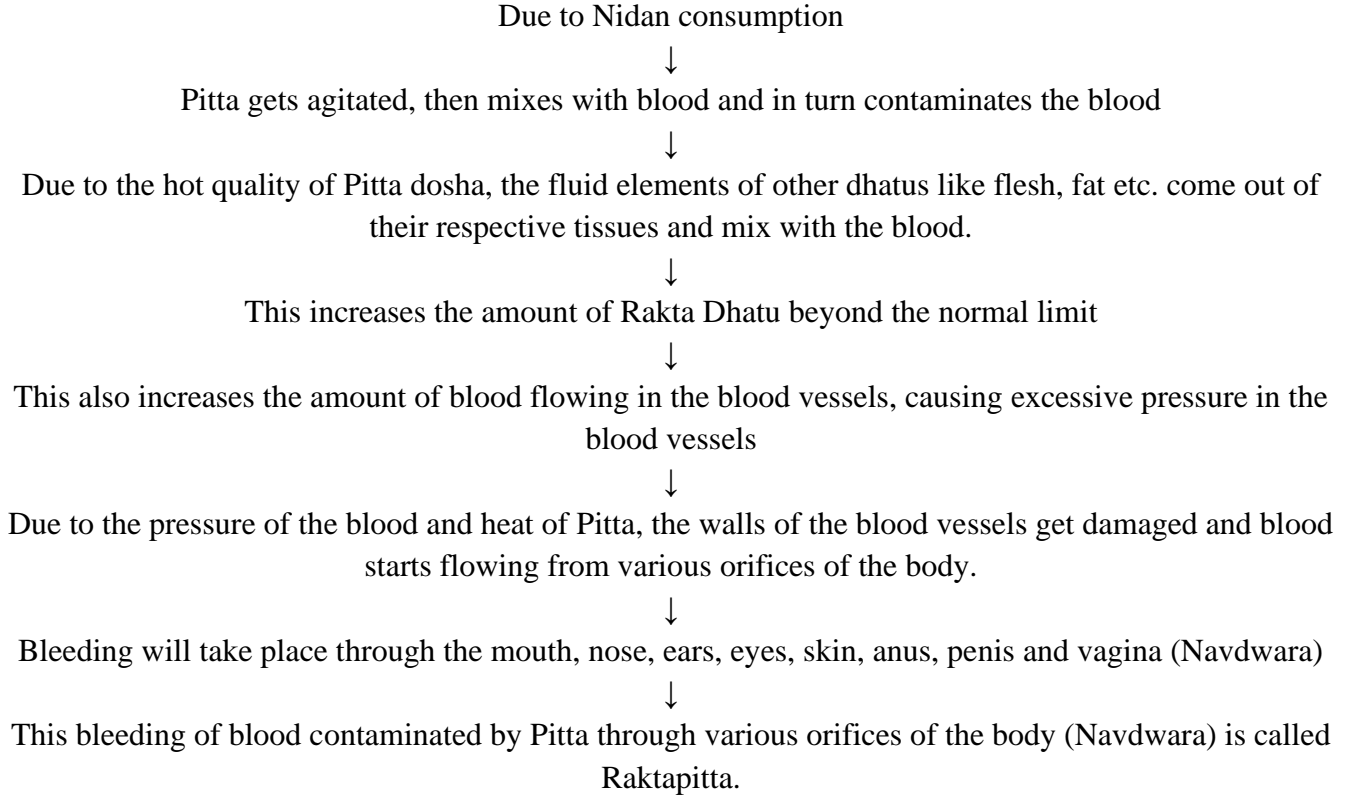
- 1. General Assessment-** There was no history of serious sickness in the patient. Her pulse rate was 78 beats per minute, and her blood pressure was 110/70 mmHg. She had no addictions such as alcohol, smoking, or tobacco. Her quality of life has suffered as a result of bruises, heavy bleeding and she has low immunity.
- 2. Local Inspection-** The patient had no severe deformity. She had bruises on her body.
- 3. Systemic investigation-** The patient was aware of the date, time, and location. Her respiratory and cardiovascular systems were also normal. At rest, the respiratory rate was 18 breaths per minute. The findings of the eightfold examination were as follows:
 - **Nadi** (pulse) Pitta Pradhan and Kaphanubandhi
 - **Mutra** (urination) and Mala (bowel habit) were normal
 - **Jivha** (Tongue) coated
 - **Shabda** (speaking) was normal
 - **Sparsh** (Palpation) was Normal
 - **Drik** (vision) was normal (6/6 both eyes)
 - **Akriti** (Built) was normal

The tenfold examination revealed

- 1. Dushya** (Any tissue of the body that gets vitiated) was Rakta Dhatu,
- 2. Desha** (Habitat)- Sadharan
- 3. Bala** (Strength)- Madhyam
- 4. Kala** (Time)- Sheeta Rutu (Winters)
- 5. Agni** (Digestive fire) – Mandya,
- 6. Prakriti** (Body constitution)- Pitta-Kapha,
- 7. Vaya** (Age)- madhyam (Middle age),

8. **Satva** (Psychic condition)- Madhyam,
9. **Satmya** (Homologation)- Sheet Jala (Cold water)
10. **Ahar** (Diet)- Sweet and salty taste 2-3 times in a day

4. Raktapitta Samprapti–



5. Investigation

To confirm the diagnosis of ITP the patient was suggested to do CBC with bone marrow. The platelets count was 3,000. The decreased value of platelet in CBC suggested ITP. So based on the medical history given by patient and pathological reports the diagnosis of the patient was ITP (Immune Thrombocytopenic purpura)

6. Therapeutic measures

The patient was instructed to take medicines, including Cap Platoplan, Kumar kalyan ras, Swaran vasant malti ras, Mahamanjishthadi kwath, Syrup Platoplan, Syrup Hemoplan, Cap Spirulina, Pitta balance, Kamdudha ras (moti), Gandhak rasayan. All of these medications must be taken by her twice a day with lukewarm water. Take all prescribed medications within a 5-minute window.

Table 2. Lists the ingredients for PLATO PLAN CAPSULES in detail

Sr. no.	Sanskrit name	Common Name	Botanical name	Rasa	Viapaka	Veerya	Action
1.	Erاند karkati	Papaya	<i>Carica papaya</i>	Tikta, Katu	Katu	Ushna	Pacifies Kapha and Vata dosha

2.	Giloy	Guduchi	<i>Tinospora cordifolia</i>	Kshaya, Tikta	Madhura	Ushna	Doshatrayahara (Balances Three dosha)
3.	Ashwagandha	Ashwagandha	<i>Withania somnifera</i>	Katu, Tikta, Kshaya	Katu	Ushna	Balances tridosha
4.	Amalaki	Amala	<i>Emblica officinalis</i>	Madhur, Amla, Katu, Tikta, Kshaya	Madhura	Sheeta	Balances all three dosha
5.	Shigru	Moringa/ Shobhanjan	<i>Moringa pterygosperma</i>	Katu, Tikta	Katu	Ushna	Balances Kapha and Vata dosha
6.	Jivanti	Dodi shak	<i>Leptadenia reticulata</i>	Madhur	Madhura	Sheeta	Balances all the three dosha

Results and Follow up–

1st Follow-up Result (After - 30 days):- The patient reported that she was doing well, was feeling healthy, and had not previously displayed any ITP symptoms while she had been following all medications for 15 days.

2nd Follow-up Result (After - 60 days):- After following our prescription continuously for 60 days she found an amazing change and more than 60% of symptoms were reduced.

3rd Follow-up Result (After - 90 days):- After taking an ideal course of 90 days (3 months), now the patient is completely fine and has no symptoms of ITP.

Table 3 shows how medications affect hematological parameters, and Table 4 shows follow-up data up to one month after medication initiation.

S.No	Time/ Duration	Patient’s condition before Planet Ayurveda’s Treatment	Patient’s condition after Planet Ayurveda’s Treatment
1.	1st month	41000 (4 dec 2022)	189000 (06 jan 2023)
2.	2nd month		229000 (10 feb 2023)
3.	3rd month		204000 (26 march 2023)

GRAPHICAL ILLUSTRATION

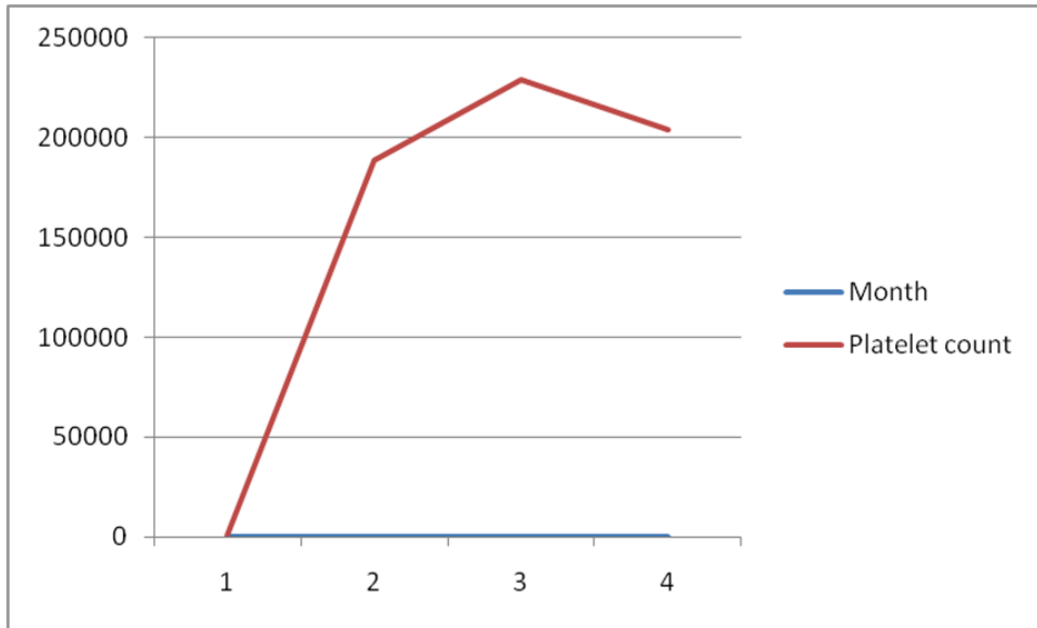


Table 5. Follow up line treatment

Date	Treatment Plan	Aushadhi sevan Kaal	Symptoms observed on Follow up
4 Dec 2022	Cap Platoplan Kumar kalyan ras, Swaran vasant malti ras, Mahamanjishthadi kwath, Syrup Platoplan, Syrup Hemoplan, Cap Spirulina, Pitta balance, Kamdudha ras (moti), Gandhak rasayan	2 capsules, 2 tablets and 2 teaspoon of syrups	Bruises, Nose bleeding, Heavy menstruation, Pain in left leg and irritability
06 jan 2023	Continue all medication	Same	No bleeding, pain reduced, bruises decreased
10 feb 2023	Continue all medication	Same	No major symptoms observed
26 march 2023	Continue all medication	Same	No bleeding, no pain, no heavy menstruation, no bruises, no irritability

Discussion

The disease ITP (Idiopathic thrombocytopenic purpura) can be correlated with Tiraygata Raktapitta. Bleeding is the common clinical symptom of the itp and elderly patients are more prone to the bleeding. The present case of itp patients have bruises, heavy menstruation and irritability. It can be correlated with Tirayagata Raktapitta in Ayurveda. Raktapitta is a bleeding disorder caused by the vitiation of Pitta and Rakta. The patient was admitted in PGI and infused IVIG. Based on the red and purple spots on body parts and bleeding from the nose, the present case has been diagnosed as Tiryagata Raktapitta.

Pathology

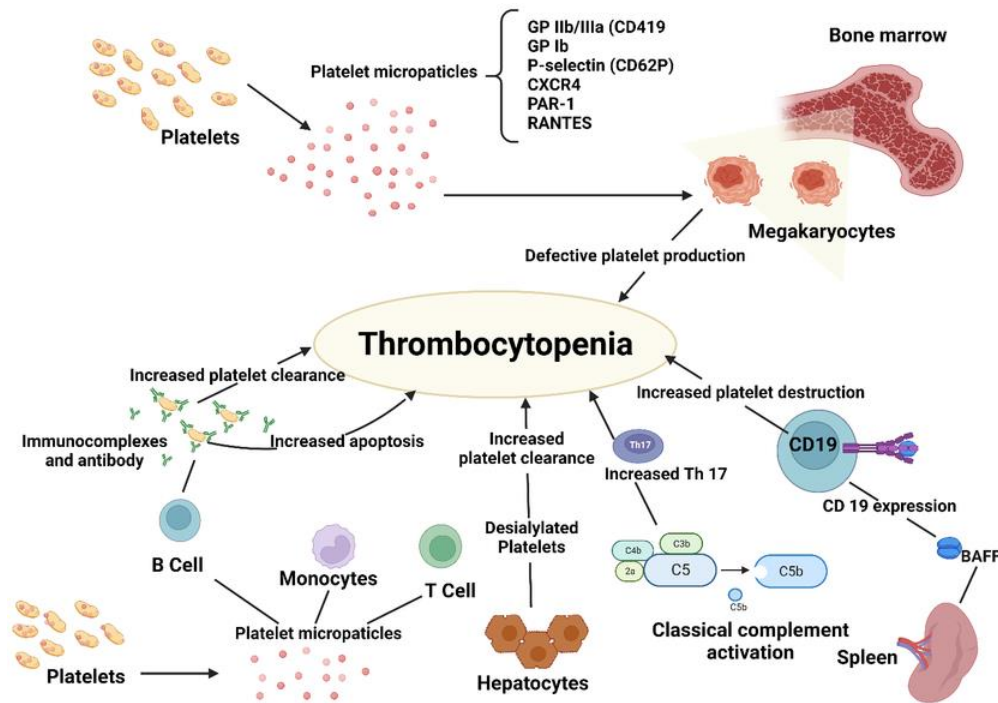


Fig. 1 Pathology of ITP

This case study describes a female patient who had ITP. In this instance, Tridosha vitiation is predominantly linked to ITP. The patient had taken 1-2 capsules, 1-2 tablets and 2 teaspoon of each Cap Platoplan, Kumar kalyan ras, Swaran vasant malti ras, Mahamanjishthadi kwath, Syrup Platoplan, Syrup Hemoplan, Cap Spirulina, Pitta balance, Kamdudha ras (Moti), Gandhak rasayan with lukewarm water for 30 days

Sr. No.	Name of Medicines	Action
1.	Cap Platoplan	It stimulates the bone marrow to produce platelets It supports the immune system It also Promotes blood purification
2.	Kumar kalyan ras	It has immunomodulatory effects

3.	Swaran vasant malti ras	It has immunomodulatory effects
4.	Mahamanjishthadi kwath	Helps to balance excess pitta Helps in blood purification
5.	Syrup Platoplan	It stimulates the bone marrow to produce platelets It supports the immune system It also promotes blood purification
6.	Syrup Hemoplan	It is a natural blood purifier, Increases haemoglobin Helps in general weakness.
7.	Cap Spirulina	Supports a healthy immune system Helps to maintain overall health It has antioxidant properties and immune-boosting properties Maintain a healthy circulatory system.
8.	Pitta balance	Balances the aggravated pitta dosha in the body It is helpful in leg cramps Helps in irritability
9.	Kamdudha ras (moti)	Helps in balancing Pitta dosha
10.	Gandhak rasayan	It helps boost the immune system and flushes out toxins. Helps pacify pitta dosha

The patient was instructed to avoid all dairy products, Non vegetarian food, spicy food , All kinds of packed and processed food, and citrus fruits. And also recommended two types of Juices to be taken daily- Green juice and Red juice

Green Juice – Papaya leaves, mint leaves, wheatgrass, Durva (Cynodon dactylon) grass, coriander leaves, Spinach leaves, Green grapes and 1 Amla.

Red Juice:- Pomegranate, beetroot, Ashwagandha leaves, carrot, Apple.

The patient's view point:

When the patient first visited the outpatient department she was very frustrated with the symptoms of ITP, especially the heavy bleeding and leg pain which affected her quality of life and distracted her at work. She has to take steroids regularly, which also has adverse effects. However, when she started following Ayurvedic treatment, her symptoms quickly disappeared and she now trusts Ayurvedic medicines.

Informed permission

The patient's written informed consent has been obtained in order to publish the results for the benefit of

scientific society knowledge.

Conclusion:

Ayurvedic treatment improved platelet count in chronic ITP (Tiriyagata Raktapitta) patients. The bruising completely disappeared with Ayurvedic treatment without any recurrence. Ayurvedic treatment appears promising in the management of chronic ITP and raises hope for patients who suffer from extreme idiopathic thrombocytopenia purpura, and undergo invasive diagnostic procedures such as corticosteroids and bone marrow biopsy, and not getting satisfactory relief in allopathy. Its severity depends on the cause and the amount of blood loss; is evaluated clinically. When this disease changes its direction it becomes incurable and has serious consequences. Therefore, it should be treated immediately before it spreads. In this clinical case study, the patient has shown good symptomatic improvement during the management of ITP. With the help of Ayurvedic formulations, the patient gets relief from the symptoms. The drugs used in the management of ITP have antioxidant, immunomodulatory, antimicrobial, and anti-inflammatory properties. These properties of the drug prevent platelet destruction by the immune process. Thus, symptoms of bruising, epistaxis, heavy menstruation, pain in the left leg and irritability were improved.