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AYURVEDIC MANAGEMENT OF IMMUNE THROMBOCYTOPENIC PURPURA (ITP)

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ABSTRACT

ITP (Immune thrombocytopenia purpura) is an autoimmune disorder characterised by reduced platelet count. ITP can occur without any cause (Primary ITP) or may occur with any cause (Secondary ITP). It can be acute or chronic and bruises, bleeding, tiny red spots are the most common symptoms of the ITP. A 3 years old male patient presented with the complaints of low platelet counts, red spots, bruises, itching and hematuria. The clinical findings and symptoms of the patients are attributed to ITP. In Ayurvedic diagnosis it is associated with Tiryagata Raktapitta. The patient was given Cap. Platoplan along with Swaran vasant malti ras, Cap. Giloy, Immune booster, etc. After 1 month of taking the medicines, the patient had some relief in some symptoms. After completing the whole medications Course, the patient gets relief from all the symptoms including reduced platelet counts.

KEYWORDS: ITP, Tiryag gata Raktapitta, Cap. Plato Plan along with Swarn vasant malti ras, Cap. Giloy, Immune booster, Planet Ayurveda.

INTRODUCTION

ITP (Immune thrombocytopenic purpura) is an autoimmune condition in which the immune system mistakenly attacks the platelets that can lead to low platelets. The main feature of this pathology is the rise of peripheral destruction of platelets, with most patients showing anti-platelet membrane glycoprotein antibodies. The most serious complication is bleeding due to the platelets that are damaged. Mortality from bleeding is 1% in children and 5% in adults. In the case of adults with ITP, elderly patients and patients with a history of bleeding have a greater risk of serious bleeding.[1][2] The International Working Group on Immune

thrombocytopenic purpura defines Immune thrombocytopenic purpura (ITP) according to the following clinical stages.[3]

These are

- Newly diagnosed ITP occurs in the first three months after diagnosis
- Persistent ITP lasts 3-12 months
- Chronic ITP lasts longer than 12 months
- Refractory ITP is failure of splenectomy

ITP may occur in association with infections such as HIV, malignancies like Lymphoma, and common autoimmune diseases such as SLE (Systemic Lupus Erythematosus), Autoimmune hepatitis, etc.[4] ITP affects patients of all ages, sexes, and races, with the overall annual incidence in adults estimated at 3.9 per 100,000. A higher incidence has been observed in women and older individuals, particularly those over the age of 60.[5]

There are two main forms of ITP. They are primary and secondary immune thrombocytopenic purpura.[6]

- **Primary immune thrombocytopenic purpura:** It is an acquired autoimmune disorder, which may manifest either as a primary disease characterised by isolated thrombocytopenia in the absence of any known cause for ITP.
- **Secondary immune thrombocytopenic purpura:** It is associated with other causes such as adverse drug reactions, other autoimmune disorders, infections, etc.

The basis of ITP treatment is to prevent major bleeding rather than to achieve a 'normal' platelet count. The practical goal of therapy in ITP is to achieve a hemostatic platelet count of at least 2 lakhs while causing minimal toxicity.[7] Modern science has several treatments for ITP, such as oral corticosteroids or surgical removal of the spleen. However, long-term use of steroids has many side effects and surgical procedures, mainly splenectomy, have immediate and long-term side effects.[8]

According to Ayurveda, autoimmune disorders are a result of persistent unhealthy lifestyle and diet. Ayurveda works on the root cause of the disease, where it starts treating the attacked immune system.[9] This disease needs to be understood from other clinical sciences. The symptoms described in ITP can be correlated with the symptoms of Rakta Pitta.[10]

According to Ayurveda, ITP (Immune Thrombocytopenic purpura) can be correlated with

Tiraygata Raktapitta. According to Acharya Vagbhata, excessive consumption of hot, sharp, bitter and salty food causes pitta to become aggravated. In this disease, Pitta-dominant vata and kapha become contaminated, resulting in an imbalance of the Rakta dhatu. This aggravated pitta combines with the blood and causes rakta pitta. Apart from this, the aggravated blood comes out of all the pores including hair follicles called Tirayak gata Rakta Pitta.[11]

Tiryakgata Raktapitta is a Pitta Pradhan disease and if it turns into Pitta Pradhan Tridoshaja disease, then generally any disease turns into Sannipathaj in its advanced stage. Due to its seriousness, it is considered Mahagada.

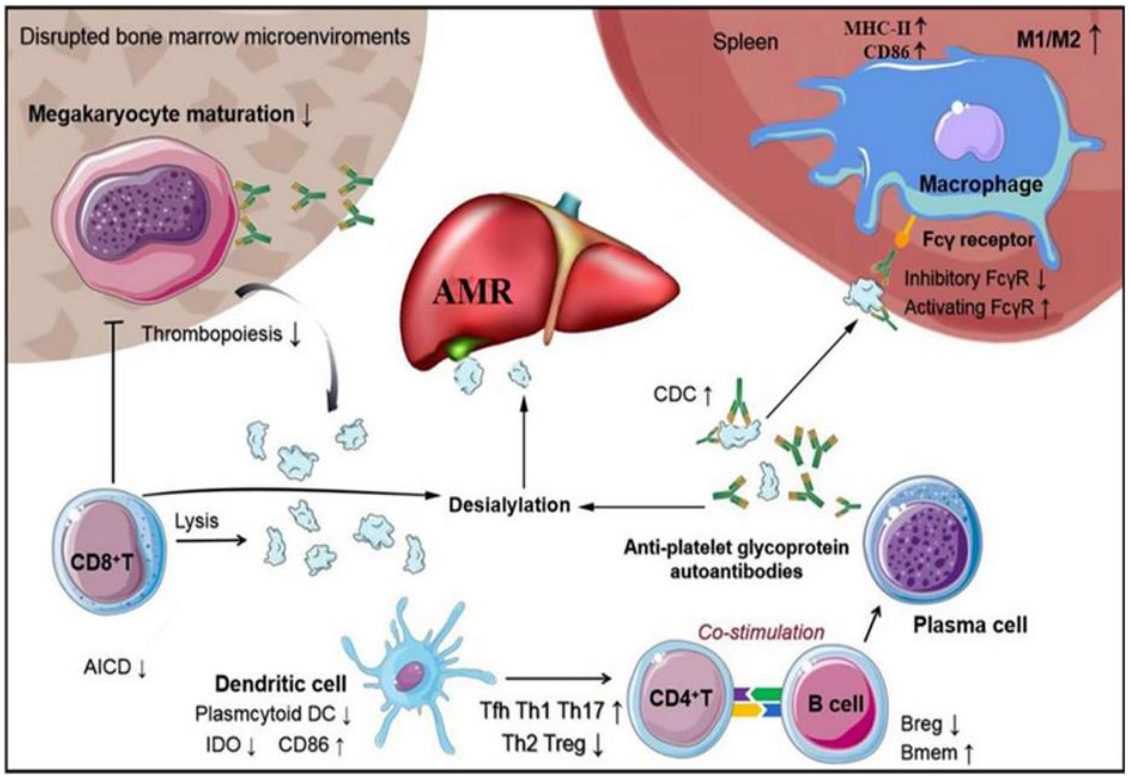
Table 1: Similarities between Raktapitta and Immune Thrombocytopenic purpura.

Raktapitta	**ITP**
Bleeding from the all the orifices	Bleeding from nose, gums, urine, menstruation, etc.
Reddish, Purple, Bluish discoloration of the body	Bruises
Jawar	Fever
Daurbalya	Weakness
Klam	Fatigue

Pathophysiology of ITP according to Ayurveda and Modern aspect

Modern aspect

Harrington and Hollings documented the birth of a child affected with thrombocytopenia purpura in 1951 whose mother had chronic ITP[12] Mechanisms of cellular pathogenesis in ITP. Various cell types are involved in the pathophysiology of ITP. Improper regulated megakaryocytes and platelets produced autoantibodies that are destroyed in the spleen and liver when plasma and B-cells contact.[13] The cellular immune response is also affected, leading to a decrease in Tregs and Bregs, allowing autoreactive plasma cells to survive as well as an imbalance of The CD4+ T-cell subsets.[14] Additionally, activation of cytotoxic CD8+ T lymphocytes results in the death of megakaryocytes (MKs) and platelets as well as disruption of bone marrow homeostasis.[15] Therefore, ITP pathogenesis can also be explained by decreased megakaryopoiesis and thrombopoiesis in addition to platelet destruction.[16]



Ayurvedic aspect

According to the vikriti of Raktapitta, initially the disturbance of pitta is caused due to diet having hot (Ushna), sharp (Tikshna), sour (Amla), pungent (Katu) and salty (Lavana) nature and activities like living in extreme heat and hot environment. Gradually the vitiated pitta further vitiates the Rakta Dhatu due to its similar properties.

Both of them get further aggravated and the fluid of other successive Dhatu starts getting drained out. As a result, this fluid increases in the amount of blood and gets drained out from the upper and lower parts of the body.[17] Raktapitta mainly affects the rakta vaha srotas and its roots, i.e. liver (Yakrit) and spleen (Pliha).[18] In this condition, the contaminated blood crosses the tissue barrier boundary and travels through the blood vessels in the body and eventually causes bleeding from various orifices.

Due to Nidan consumption

↓

Pitta gets vitiated, then mixes with blood and in turn contaminates the blood

↓

Due to the hot quality of Pitta dosha, the fluid elements of other dhatus like flesh (Mamsa), fat (Meda) etc. come out of their respective tissues and mix with the blood.

↓

This increases the quantity of Rakta Dhatu beyond the normal limit

↓

This also increases the quantity of blood flowing in the blood vessels, which creates excessive pressure in the blood vessels

↓

Due to the pressure of blood and heat of Pitta, the walls of the blood vessels get damaged and blood starts flowing from various orifices of the body.

↓

Bleeding occurs from mouth, nose, ear, eye, skin, anus, penis and vagina (Nava dwara)

↓

The leakage of blood contaminated by Pitta from various orifices (Nava dwara) of the body is called Raktapitta.

MATERIALS AND METHODS

Case study

Harshit, a 3 year old toddler was a boy from Jammu and Kashmir. One day, He had fallen sick and had a fever and rashes on his skin and was bleeding profusely from the nose. Then his parents went to the nearest laboratory to check the CBC for the abnormality. As per the results, the platelet count is very low i.e 8000. After seeing this number of platelets they got scared and visited Dayanand Medical College (DMC), Ludhiana and got admitted there for 15-16 days and platelet transfusion was done. The doctor suggested some tests like Complete blood count along with bone marrow aspiration/ Biopsy to confirm the diagnosis and after the results it was confirmed that harshit was suffering from ITP. Doctors told them there is no permanent cure for this disease and you have to continue the medication for ITP the whole life. After that they went to PGI chandigarh after recommendation of their relatives. Doctors asked the patient's parents to get admitted in PGI as the count was 19,000 when they did the CBC count. In PGI, Harsil got admitted again for some days and took the treatment but at last the doctors suggested the splenectomy. The parents of Harshil were devastated and disappointed with the doctor's words. Then they started searching for the best treatment for ITP on the Internet so that they can avoid the surgery and their child can live a normal life. After a lot of searching on the internet, Harshit's father came to know about Planet Ayurveda, Mohali. After watching some videos they found a ray of hope. With that hope they arrived at Planet Ayurveda Mohali in January 2018, bringing all the reports that showed 10,000 platelet

counts and hospital notes and everything that concerned his platelet deficiency.

With Ayurvedic herbal remedies his reports came to normal showing 2,50,000.

Patient case sheet

Known case of (K/C/O) - ITP (Immune Thrombocytopenic Purpura)

No History of (N/H/O) - Hypertension, Type II Diabetes Mellitus, Thyroid

Family History - There is no family history of ITP

Chief Complaint of (C/ O) during 1 year of treatment- Red spots, bruises, itching, nose bleeding, fever, hematuria. And after one year the patient was fine with the symptoms.

Investigations

CBC along with Bone marrow aspiration biopsy to diagnose this.

Diet chart

The patient was instructed to avoid all citrus fruits, dairy products, non vegetarian food, packaged food, processed food, bakery food, junk food, things made from refined flour and refined sugar. Patient was also recommended two juices–green juice and red juice.

- Green Juice- Papaya leaves, mint leaves, wheat grass, durva (Cynodon dactylon) grass, coriander leaves, spinach leaves, green grapes and 1 Amla.
- Red Juice- Pomegranate, beetroot, ashwagandha leaves, carrot, apple, marigold and Rose Petals.

Management

Table 2: Treatment for 1st month.

Sr. No.	Medicine Name	Dosage	Frequency	Vehicle
1.	Cap. Plato Plan	1 capsule	BD	Plain Water
2.	Cap. Giloy	1 capsule	BD	Plain Water
3.	Tab. Praval Panchamrit Ras	1 tablet	BD	Plain Water
4.	Cap. Immune booster	1 capsule	BD	Plain Water
5.	Tab. Balark Ras	1 tablet	BD	Plain Water
6.	Cap. Ashwangandha	1 capsule	BD	Plain Water
7.	Tab. Swaran Vasant Malti Ras	1 tablet	BD	Plain Water
8.	Syrup Arvindasav	1 teaspoon	BD	Plain Water
9.	Syrup Rohitakarishta	1 teaspoon	BD	Plain Water
10.	Syrup Amritarishta	1 teaspoon	BD	Plain Water

Table 3: Treatment for 2nd month.

Sr. No.	Medicine Name	Dosage	Frequency	Vehicle
1.	Sanjeevani Vati	2 tablets	BD	Plain Water
2.	Cap. Giloy	1 capsule	BD	Plain Water
3.	Cap. Plato Plan	1 capsule	BD	Plain Water
4.	Syrup Arvindasav	2 teaspoons	BD	Plain Water
5.	Durva Putpak Swaras	2 teaspoons	BD	Plain Water
6.	Cap. Shatavari	1 capsule	BD	Plain Water
7.	Swamala Compound	2 teaspoons	BD	Plain Water

Table 4: Treatment for 3rd month to 12th month.

Sr. No.	Medicine Name	Dosage	Frequency	Vehicle
1.	Cap. Plato Plan	1 capsule	BD	Plain Water
2.	Cap. Giloy	1 capsule	BD	Plain Water
3.	Tab. Praval Panchamrit Ras	1 tablet	BD	Plain Water
4.	Cap. Immune booster	1 capsule	BD	Plain Water
5.	Tab. Balark Ras	1 tablet	BD	Plain Water
6.	Cap. Ashwangandha	1 capsule	BD	Plain Water
7.	Tab. Swaran Vasant Malti Ras	1 tablet	BD	Plain Water
8.	Syrup Arvindasav	1 teaspoon	BD	Plain Water
9.	Syrup Rohitakarishta	1 teaspoon	BD	Plain Water
10.	Syrup Amritarishta	1 teaspoon	BD	Plain Water

RESULTS

Results and Follow-up

First Follow-up Result (After 30 days): The patient's parents reported that he was feeling good, and healthy, and the symptoms of ITP like weakness, pain in abdomen bruises and nose bleeding had reduced after taking all the medicines for 30 days.

Second Follow-up Result (After 60 days):- After following our prescription continuously for 60 days, the patient's parents saw an amazing change and more than 40% of symptoms had reduced.

Third Follow-up Result (After 90 days): After following our prescription continuously for 90 days (3 months), weakness, pain in abdomen symptoms were there, but bruises and nose bleeding had reduced.

Fourth Follow up Result (After 120 days): After following our prescription continuously for 120 days, the patient's parents saw amazing change and 55% of symptoms had reduced

Fifth Follow- up Result (After 150 days): After following our prescription continuously for

150 days, symptoms like weakness, pain in abdomen, bruises, nose bleeding had reduced.

Sixth Follow- up Result (After 180 days): After following our prescription continuously for 180 days, the patient's parents saw an amazing change and more than 65% of symptoms had reduced.

Seventh Follow- up Result (After 210 days): After following our prescription continuously for 210 days, more than 75% of symptoms had reduced.

Eighth Follow - up Result (240 days): After following our prescription continuously for 240 days, more than 90% of symptoms had reduced.

Ninth Follow- up Result (270 days): After following our prescription continuously for 270 days, the patient is completely fine and there were no symptoms of ITP.

Tenth Follow- up Result (300 days): After following our prescription continuously for 300 days, the patient is completely fine.

Eleventh Follow- up Result (330 days): After taking a course of 330 days, now the patient is completely fine and has no symptoms of ITP.

Twelfth Follow- up (360 days): After taking an ideal course of 360 days (12 months) the patient is completely fine and has no symptoms of ITP.

Table 5: Ayurvedic medicines used during treatment and their actions.

Sr. No	Date	Patient's condition before Planet Ayurveda's treatment	Patient's condition after Planet Ayurveda's treatment
1.	13/1/2018	10,000	
2.	21/2/2018		20,000
3.	19/03/2018		1,50,000
4.	24/08/2018		1,56,000
5.	22/09/2018		1,38,000
6.	5/12/2018		1,90,000
7.	3/1/2019		2,50,000

DISCUSSION

This case study describes a male patient who had ITP. In this case, tridosha vitiation is primarily associated with ITP. The patient took 1 capsule, 1 tablet and 2 teaspoons each of Cap. Platoplan, Swarn Vasant Malti Ras, Cap. Ashwagandha, Tab. Balark Ras, Tab. Praval

Panchamrit Ras, Cap. Giloy, Cap. Immune Booster, Syrup Arvindasava, Syrup Rohitakarishta, Cap. Shatavari, Durva Putpak swaras, Swamala Compound and Syrup Amritarishta with plain water for 360 days.

Table 6: Lists the ingredients for PLATO PLAN CAPSULES in detail.

Sr. no.	Sanskrit name	Commo n Name	Botanical name	Rasa	Viapak a	Veerya	Action
1.	Errand Karkati	Papaya	*Carica papaya*	Katu, Tikta	Katu	Ushna	Pacifies Vata and Kapha dosha
2.	Giloy	Guduchi	*Tinospora cordifolia*	Tikta, Kshay a	Madhur a	Ushna	Doshatra yahara (Balances Three dosha)
3.	Ashwagand ha	Ashwaga ndha	*Withania somnifera*	Katu, Tikta, Kshay a	Katu	Ushna	Balances tridosha
4.	Amalaki	Amala	*Emblica officinalis*	Five tastes (Madh ura,	Madhur a	Sheeta	Balances all three dosha (Vata,
				Amla, Lavan a, Katu, Tikta, Kshay a)			Pitta and Kapha)
5.	Shigru	Moringa/ Shobhan jan	*Moringa pterygosp erma*	Katu, Tikta	Katu	Ushna	Balances Vata and Kapha dosha
6.	Jivanti	Dodi shak	*Leptadeni a reticulata*	Madhu ra	Madhur a	Sheeta	Balances all the three dosha (Vata, Pitta and Kapha)

Table 7: Ayurvedic medicines used during treatment and their actions.

Sr. No.	Name of Medicines	Action
1.	Cap. Platoplan	● Helps in increasing the platelet count ● Maintains healthy immune system ● Promotes blood purification ● Stimulates the bone marrow to produce platelets
2.	Swaran vasant malti ras	● It has immunomodulatory effects
3.	Cap Ashwagandha	● Increase platelet count by improving the functioning of immune system ● Immunosuppressive activity
4.	Syrup Arvindasav	● It has antioxidant and immunomodulatory properties ● Weakness ● Loss of appetite ● Increases physical and mental strength
5.	Syrup Rohitakarishta	● Loss of appetite

6.	Syrup Amritarishta	• It has antioxidant and immunomodulatory properties • Flushes out toxins from the body • Rejuvenating
7.	Cap Giloy	• Increase platelet count • Helps in fever
8.	Praval Panchamrit Ras	• It has calming effect • Loss of appetite
9.	Balark Ras	• Fever • Strengthen body
10.	Cap Immune Booster	• Supports healthy immune system • Throws toxins from the body
11.	Sanjeevani Vati	• Fever • Strengthen body
12.	Cap. Shatavari	• Weakness • Raktapitta shamak (Pacifies Rakta and Pitta)
13.	Durva Putpak swaras	• Stops bleeding • Rejuvenating • Increases strength • Tridosha Shamak (Balances all three doshas)
14.	Swamala Compound	• Maintains healthy immune system

CONCLUSION

The patient in this case study has shown good improvement in symptoms during treatment of ITP. Raktapitta, its severity depends on the cause and the amount of blood loss is clinically evaluated. When this disease changes its course, it becomes incurable, leading to severe consequences. Therefore, it should be treated immediately, before it spreads like wildfire. The above case study shows that the symptoms of chronic ITP can be successfully treated with the help of the basic principles of Ayurveda. Also, this case helps in making a proper diagnosis. This study can aid further research on the treatment of ITP with the help of Ayurveda principles. The medications used in the treatment of ITP have immunomodulatory antioxidant, antimicrobial, and anti-inflammatory properties. These properties of the drug prevent platelet destruction by the immune process. Thus, improvement was observed in the symptoms of red spots, bruising, itching, nose bleeding, fever, and hematuria.

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