

POTENTIAL OF AYURVEDA IN CASE OF IDIOPATHIC THROMBOCYTOPENIA PURPURA: A CASE STUDY

^{1*}Dr. Namrata P. Zanzat, ²Dr. Snehal Dhayaphule and ³Dr. Shashiprabha Gupta

^{1,2}PG Scholar, Department of Rasashastra, Government Ayurvedic College, Osmanabad.

³Ex. HOD & Associate Professor, Department of Rasashastra, Government Ayurvedic College, Osmanabad.

Article Received on
20 Nov. 2021,

Revised on 09 Dec. 2021,
Accepted on 30 Dec. 2021

DOI: 10.20959/wjpr20221-22712

*Corresponding Author

Dr. Namrata P. Zanzat

PG Scholar, Department of
Rasashastra, Government
Ayurvedic College,
Osmanabad.

ABSTRACT

I - indicate the immune system which say about abnormal response of immune system, T- indicate thrombocytopenia which means low platelet count. The specific reason for ITP is not known so it is difficult to cure. Ayurveda classifies ITP under "*Tiryaka Raktapitta*" is a blood disorder mentioned in the classical ayurvedic texts. In *Tiryaka Raktapitta*, all the three doshas of body's bloodstream, vata, pitta and kapha are vitiated resulting in the imbalance of metabolism of the bloodstream or resulting the imbalance of agni in the rakta dhatu. This imbalance affects the immune system and create an error where the immune system of body start attacking its own platelets. Treatment of ITP depends on severity of its symptoms. There are some classical

ayurvedic formulas that are used to balance dosha which is directly linked with ITP. The present case study was dealt with the chronic form of the disease, to check the bleeding and to stop destruction of platelets. In this case an effort was made to treat a 54yr old female patient having symptoms of bluish purple discolouration of skin on thighs, weakness since 3 years, treated with *Durva swaras*, *Papaya leaves juice*, *kamdudha ras*, *Makardhwaj*, *Prawal pishti* after 1 month of treatment patient reported with much improvement in symptoms and increase in platelet counts.

KEYWORD: *Tiryaka Raktapitta*, *Durva swaras*, *Papaya leaves juice*, *Kamdudha ras*, *Makardhwaj*, *Prawal pishti*.

INTRODUCTION

Immune thrombocytopenia Purpura (ITP) is a blood disorder characterized by a decrease in the number of platelets which are produced in blood marrow. They help to stop bleeding by clumping together to form a clot that seals cuts or small tears in blood vessel walls and tissues. Platelets are cells in the blood that help stop bleeding. A decrease in platelets can cause easy bruising, bleeding gums, and internal bleeding. ITP is caused by an immune reaction against one's own platelets. It has also been called autoimmune thrombocytopenia purpura. The specific reason for ITP is not known (idiopathic).^[1] ITP can occur in both children and adults. They are classified into two form acute and chronic.

Acute Thrombocytopenia Purpura usually affects young children, ages 2 to 6 years old. The symptoms may follow a viral illness, such as mumps, measles and chickenpox. Acute ITP usually starts suddenly and symptoms usually disappear in less than 6 months, or often within a few weeks. Treatment is often not needed. Acute ITP is the most common form of disorder.

In Chronic Thrombocytopenia Purpura onset of disorder can happen at any age, and the symptoms can last a minimum of 6 months, several years, or a lifetime. Adults have this form more often than children do, but it does affect adolescents. Females have it more often than males. Chronic ITP can recur often and requires continue follow-up care under guidance of blood specialist (hematologist).

ITP can also be classified as Primary, occurring on its own, or secondary, occurring alongside another condition. Autoimmune disease, chronic infections, medications, pregnancy, and certain cancers are common secondary triggers. With ITP, the platelet count may become less than 100000 or even less, against the normal range of 1,50,000 to 4,50,000. By the time significant bleeding occurs, you may have a platelet count of less than 10,000. The lower the platelet count, the greater the risk of bleeding.

In ITP usually skin becomes purple in color at some places because of blood has leaked under it. A bruise is collecton of blood underneath the skin. Mucosal bleeding leads to menorrhagia in women, nasal bleeding, bleeding from gum, maleana and hematuria are some features in male and female too.

The incidence of primary ITP in adults is 3.3/ 100000 adults per year with a prevalence of 9.5 per 100000 adults.^[2]

AS PER MENTION IN CLASSICAL TEXT, Bleeding disorders (raktpitta) caused by an excess of pitta dosha vitiating blood (rakta dhatu) in the body. This leads to capillary breakdown causing hemorrhage from external openings like mouth, per rectum, nose, eyes, ear, and urethra. Contributing factors that increase the probability of raktapitta include consumption of incompatible food substances, consuming certain meats with alcohol, butter milk with meat of animals etc. The regular exposure to dietary and lifestyle factors with hot (ushna) properties vitiates pitta. This pitta has the same colour and smell as rakta, and blends seamlessly with it.^[3] Vitiating pitta and increased rakta circulate in the channels and the resulted increased in volume of the blood overflows from the bodily orifices. Raktapitta is classified into three types.^[4] This pathogenesis associated with vitiating kapha, leads to bleeding from upper orifices(*Urdhvaga Raktapitta*), whereas if it is associated with vitiating vata, leads to bleeding from lower orifices(*Adhoga Raktapitta*).When all doshas are vitiating and circulating in the blood stream, the manifestation is subcutaneous(*Tiryaga Raktapitta*).

ITP can be correlated with *Tiryaga Raktapitta* as in both vitiating of rakta occurs and manifestation is subcutaneous.

In Present case, female patient under study had following clinical feature as purple discoloring of skin on hand and in thighs, weakness, restlessness and insomnia. Hence patient treated on ayurvedic line of management with *Pittashamak*, *shitviryatmak*, *Raktaprasadan*, *Ojovardhak chikitsa* thus which helps to subside tikshnata of raktapitta.

MATERIALS AND METHOD

54 year old female patient was attended at OPD in Department of Kayachikitsa, Government Ayurvedic College, Osmanabad. The patient had complaints related to ITP which include, weakness, restlessness, insomnia and with platelet count 12,000 (18/7/2021).

On history taking patient states that, she is having purple discoloration of skin on hand and in both thighs since 3 years. Doctor diagnosed as ITP and started treatment as per allopathy. Patient underwent treatment but could not get relief completely so she then approached our hospital for better management. No significant past history any major illness or similar illness in her family member is present. On further examination her vitals were in normal range, with regular pulse. There were no icterus, clubbing, cyanosis, lymphadenopathy, edema feet but with some pallor was noted on lower palpable conjunctiva. No significant findings were

present on systemic examination. On investigation her ANA (Antinuclear Antibody Test) was found as positive with normal Bone marrow aspiration and biopsy study.

ASHTAVIDHA PAREEKSHA

Nadi-76/min, Mutra- regular (5times/day),

Mal-regular (2times/day), Jihva- alipta,

Shabda-prakrita, Sparsha-prakrita,

Drika- prakrita, Akriti-prakrita.

DASHAVIDHA PAREEKSHA

Prakriti –vatapitta Vikriti –pitta Pradhan tridosha

Satva-Madhyama Sara- Madhyama

Samhanana- Madhyama, Ahara Shakti- Madhyama

Vyayama Shakti- Madhyama Pramana-ht-160cm, Wt-60kg

Vaya- Madhyama Bala- Madhya

SAMPRAPTI GHATAKA

Dosa- Pitta dosha(Ushna and Tikshna guna increased) Vata Dosha (Ruksha and Chala guna are increased)

Doshya-Rasa, Rakta, Majjadhatu

OJA not functioning well

Strotasa Pariksha- Rasa-Raktvaha strotas – Patechial heemorrhagic spots over thighs and hand.

Other strotas are normal.

HABITS-

Ahara –vegetarian

Manas- Krodha, chinta

After through clinical examination as per both systems, history and her present symptoms, drugs suppressing *Pitta* and *Raktastambhaka*, *Raktashodhaka*, *Pittashamaka* and *shitviryatmak* properties were prescribed –*Durva swaras* 20ml BD and *Papaya leaves juice* 20ml BD, *Kamdhudha ras* 250mg TDS, *Praval pishti* 250mg BD in combination with *gulkand* for 3months.

RESULTS

There was marked and riped improvement in purple discoloring of skin on hand and in thighs, restlessness, insomnia. Patient was called to OPD on day 15th and after 1 month with blood investigation. After 15 days there was gradual reduction in number of petechial hemorrhagic spots. After 1 month, there was remarkable reduction in all. She was called for regular check on OPD basis for further analysis and for effectiveness of applied therapy.

Evaluation and analysis of investigations as shown in table 1.

Sr No	Investigation	Before treatment	After treatment	
			After 15 days	After 1 month
1	HB (g/dl)	14.6	14.7	14.1
2.	Platelet count(/cumm)	12,000	32,000	1,31,000
3.	Neutrophils (%)	65	62	62
4.	Lymphocytes(%)	25	27	26
5.	Eosinophil(%)	05	03	03
6	Monocyte(%)	05	08	07
7	Basophils(%)	00	00	00

Oral medication used in management as shown in table 2.

Formulation	Dose	Duration	Anupaan
<i>Durva swaras 10ml</i>	BD	1month	
<i>papaya leaves juice 10ml</i>	BD	1month	
<i>Kamdudha ras 500mg</i>	TDS	1month	With <i>gulkand</i>
<i>Praval pishti 250mg</i>	TDS	1month	With <i>gulkand</i>
<i>Makardhawaj suvarnyukta 125mg</i>	<i>Rasayankal</i>	15 days	With milk and ghee

DISCUSSION

In this study, according to *Rogi balandvyadhi bal* planed for *Sanshamani Kriya*.^[5] *Durva swarasa* and Papaya leaves juice in equal amount was given for treatment ITP. *Acharya bhavaprakash* has mentioned the action of papaya leaves juices as it helps to maintain a healthy platelet count and fights the symptoms of infections and fevers. It contains antioxidants, Vitamins A, C & E, folic acid, and magnesium that help in smooth functioning of organs.

Papaya leaves Juice is of great value as it helps, supports, to raise platelet count and in large immunity and digestion of our body system.^[6] It helps to detox body and flush out up unwanted toxins, there by promoting healthy liver function. Its anti-inflammatory properties

promote smooth functioning of all organs. It improve *raktadhatvagni* and stimulate erythropoiesis.^[7]

Durva swaras has action as *Rasayana*(rejuvenation), *Sangrahi* (astringent), *Balya* (increase the strength), *Agnidipana*(increase digestive fire) and *Tridoshshamaka*.^[8] Durwa grass contains crude proteins, carbohydrate, mineral constituents oxides of magnesium, phosphorous, calcium, sodium and potassium and vitamin C. It has property of haemostatis, refrigerance and healing so externally it is used in wounds, hemorrhages, burning sensation (like urticaria, erysipelas) and depigmentation of skin. Internally the plant is used in various diseases like bleeding in dysentery, piles, epistaxis, menorrhagia, diarrhea and urinary tract infection.

Anticogulation and antineoplastic activity so it reduces the immunologic destruction of platelets and increased megakaryocytes in the bone marrow.

Kamdudha ras –Kamdudha Ras(mukta yukta) preferred as per the reference of Ras Yoga Saar. It content *Mukta bhasma*, *Prawal bhasma*, *muktashukti bhasma* *kapardik bhasma*, *shankha bhasma*, *suvarna gairik* and *guduchi satwa*. All are taken in equal proportion. In this condition of Pitta Pradhan Raktapitta, Kamdudha Ras consists of *sudha warg* which is *shitviryatmak* and *pittashamak* and thus helps to subside tikshnata of Raktpitta.^[9] It also contains *suvarna gairik bhasma* which is *raktstambhak* and *pittashamak*. A *guduchi satva* is also *pittashamak*. Hence it can be given with gulkand, *Gulkand* has cooling, antioxidant, rejuvenator. It reduces body burning sensation it acts as *Pittashamak*.^[10]

Praval pishti- Pishtis are made up with soft drug. They don't undergo heat treatment as bhasma. they having coolant property than other formulation. So they are generally used in Pittaja disorders where cooling effect is desired. *Praval pishti* can be made with gulab jal or ketaki. Its indicated for kasa pittaj, vikar manodaurbalya, hriddaurbalya.^[11]

The combination of *kamdudha ras*, *praval pishti*, pacifies the pittadosha and acts as rasayanan so it strengthens the immunity and helps in reducing the immunological destruction of platelets raktashamak so it pacifies the *raktadosha* and *raktaprasadak* so it stops bleeding and lighten the purpura on hand and in both thighs.

Makardhwaj- Hrudaya, vishaghna, raktaprasadak, balya, strengthens immunity, beneficial in general debility. It is an antioxidant and rejuvenator. It helps to maintain a state of homeostasis in body and regulate body function during stress and weakness.^[12]

Diet is most important factor in recovery of ITP patient, planed for more *tikta* and *bitter rasatmak* food such as Shalishhatik rice, mudag, masur yusha, Bitter gourd, pumpkin etc.^[13] processed and fried food, spices and spicy food item, meat, milk and dairy products.

CONCLUSION

Marked improvement was found in signs and symptoms of disease. After treatment there is marked increase in platelet count. It is an effort to understand the role of ayurvedic chikitsa in understanding concept of *Tiryak raktapitta* applied in it. Ayurvedic treatment gives better quality of life to ITP patient. So it can be concluded that combination of above can be used for treatment of it. It should be assessed on large scale with proper research protocols.

REFERENCES

1. Harsh Mohan Textbook of Pathology, by Harsh Mohan, Published by Jaypee Brothers Medical Publisher(P) Ltd New delhi, Six edition, 2010 chapter A 13 Page No 332.
2. Michele P. Lambert, "Clinical updates in adult immune thrombocytopenia.", Blood, 2017 May 25; 129(21): 2829–2835.
3. Agnivesa's Charak Sahita Text revised by caraka & Drdhabala, edited by Dr, Brahmanand Tripathi, Part 1, Chaukhambha Surbharati Prakashan Varanasi, Reprint 2005, Nidana sthana chapter 2, slok No 5, Page No-598.
4. Agnivesa's Charak Sahita Text revised by caraka & Drdhabala, edited by Dr, Brahmanand Tripathi, Part 1, Chaukhambha Surbharati Prakashan Varanasi, Reprint 2005, Nidana sthana chapter 2, slok No 5, Page No-599.
5. Agnivesa's Charak Sahita Text revised by caraka & Drdhabala, edited by Dr, Brahmanand Tripathi, Part 1, Chaukhambha Surbharati Prakashan Varanasi, Reprint 2005, Chikitsa sthana chapter 4, slok No 62-63, Page No-232.
6. Shri. Bhavamisra, Bhavaprakasa Nighantu edited by Late Dr. G. S. Pandey Chaukhambha Bharati Academy Varanasi, Reprint, 2015; 806.
7. Dengue Fever: Therapeutic potential of carica papaya L. Leaves, Front. Pharmacol, 26 April2021/http://doi.org/10.3389/fphar.2021:610912.
8. Shri. Bhavamisra, Bhavaprakasa Nighantu edited by Late Dr. G. S. Pandey Chaukhambha Bharati Academy Varanasi, Reprint, 2015; 372.

9. Krushna Gopal, Rastantrasaar and Siddhaprayog Sangraha Part-1, edited by Shri krushnanandji, edition 28th, Krishnagopal Ayurved Bhavan, Kaleda Ajamer Reprint, 2014; 223-225.
10. Krushna Gopal, Rastantrasaar and Siddhaprayog Sangraha Part 1, edited by Shri krushnanandji, edition 28th, Krishnagopal Ayurved Bhavan, Kaleda Ajamer Reprint, 2014; 396-397.
11. Krushna Gopal, Rastantrasaar and Siddhaprayog Sangraha Part-1, edited by Shri krushnanandji, edition 28th, Krishnagopal Ayurved Bhavan, Kaleda Ajamer Reprint, 2014; 94-98.
12. Gangadharshastri Gopalrao Gune, Ayurvediya Aushadhigunadharmashastra, Reprint, 2019; 395-399.
13. Agnivesa's Charak Sahita Text revised by caraka & Drdhabala, edited by Dr, Brahmanand Tripathi, Part 1, Chaukhambha Surbharati Prakashan Varanasi, Reprint 2005, Chikitsa sthana chapter 4, slok No 36-37, Page No-227.