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Case Study

Ayurvedic management of Idiopathic Thrombocytopenic Purpura: A Case Study

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ABSTRACT

Idiopathic thrombocytopenic purpura is characterized by immunologic destruction of platelets and normal or increased megakaryocytes in the bone marrow. On the basis of clinical presentation, Idiopathic thrombocytopenic purpura is classified into acute and chronic forms in which severe bleeding, or insidious with slow development with mild or no symptoms occurs. According to Ayurvedic classics ITP can be correlated with *Tiryaga Raktapitta* as in this disease all the *Dosas* are vitiated and are circulating in the blood stream and manifested subcutaneously. The present case study was dealt with, the chronic form of disease, to check the bleeding and to stop the destruction of platelets. In this case an effort was made to treat a 35 years old female patient having symptoms - blackish patches in forehead and in both lower legs, bleeding from nose and excessive bleeding during menses since 3 years treated with *Giloya* and *Durwa swarasa*, *Ojaswani churna*, *Shatavari Churna*, *Akik Pishti*, *Shudha Sphatika* and *Aamlaki Churna* in BD dose in combination with normal water in oral form for 7 months. After 7 months of treatment patient got much improvement in symptoms with increase in platelets counts.

Keywords: Idiopathic thrombocytopenic purpura, *Tiryaga Raktapitta*, *Giloya Swarasa*, *Durwa swarasa*, *Ojaswani churna*, *Shatavari Churna*, *Akik Pishti*, *Shudha Sphatika*, *Aamlaki Churna*

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INTRODUCTION

Idiopathic thrombocytopenic purpura (ITP) is the condition of having a low platelet count (thrombocytopenia) of no known cause (idiopathic)¹. As most causes appear to be related to antibodies against platelets, it is also known as immune thrombocytopenic purpura. On the basis of duration of illness, ITP is classified into acute and chronic forms. Acute form is a self-limited disorder, seen most frequently in children following recovery from a viral illness or an upper respiratory illness. The onset is sudden and severe thrombocytopenia due to formation of immune complexes containing viral antigens, and by formation of antibodies against it which cross reacts with platelets and lead to their immunologic destruction but recovery occurs within a few weeks to 6 months.

However chronic ITP occurs more commonly in adults, particularly in women of child-bearing age, develops insidiously and persists for several years. Though chronic ITP is idiopathic, similar immunologic thrombocytopenia may be seen in association with SLE, AIDS and autoimmune

thyroiditis. In chronic ITP formation of anti-platelet autoantibodies, usually by platelet-associated IgG humoral antibodies synthesized mainly in the spleen directed against target antigens on the platelet glycoproteins, Gp IIb-IIIa and Gp Ib-IX complex. Some of the antibodies directed against platelet surface also interfere in their function. Sensitized platelets are destroyed mainly in the spleen and rendered susceptible to phagocytosis by cells of the reticuloendothelial system.

ITP has an incidence of up to 6.4 per 100000 children and 3.3 per 100000 adults per year².

In ITP, usually petechial haemorrhages, easy bruising, and mucosal bleeding such as menorrhagia in women, nasal bleeding, bleeding from gums, melaena and haematuria are found.

According to Ayurvedic literatures in *Raktapitta*,³ when *pitta* vitiated *rakta* increases in amount due to *usna guna* of *pitta*, it starts flowing out of the body through different parts-upward, downward or both, or through skin pores. According to the based on direction of blood flowing

Raktapitta is classified into three types⁴ which are as follows-

a) *Urdhvaga*- the causative attributes are *snigdha* and *ushna guna* which vitiate the combination of *kapha* and *pitta* and oozing of contaminated blood occurs from upward passages or orifices i.e. from *mukha* (mouth), *Karna* (ears), *Akshi* (eyes) and *Nasa* (Nostrils).

b) *Adhoga*- the attributes are *ruksha* and *ushna guna* which causes vitiation of *vata* and *pitta* and oozing of contaminated blood occurs from downward passages or orifices i.e. from *Guda*, *Yoni* and *Mutramarga*.

c) *Tiryaka*- when all the *dosas* are vitiated and are circulating in the blood stream, the manifestation is subcutaneous.

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

In present case, female patient had the following clinical features blackish patches in forehead and in both thighs, bleeding from nose and menorrhagia. Hence the patient was administered with *Pittashamaka*, *Raktashamaka* and *Raktastmabhaka* oral medication.

MATERIAL AND METHODS

Case Presentation

35 years old female patient was attended the OPD in Department of Kayachikitsa, National Institute of Ayurveda, Jaipur. The patient had complaints related to ITP which include blackish patches in forehead and in both lower legs, bleeding from nose and menorrhagia for the last 3 years and with total platelet count 11,000/ μ l (21.12.2017). As in ITP, petechial haemorrhages, easy bruising, menorrhagia in women, nasal bleeding, bleeding from gums, melaena and haematuria are found, drugs suppressing *Pitta* and having *Raktatstmbhaka*, *Raktashodhaka* properties were prescribed- *Giloya swarasa* 10 ml BD, *Durwa swarasa* 10 ml BD and *Ojaswani churna* 2 gm BD, *Shatavari Churna* 2 gm BD, *Akik Pishti* 500 mg BD, *Shudha Sphatika* 250 mg BD and

Aamlaki Churna 2 gm BD in combination with normal water for 7 months.

History of Present illness

Patient states that she was quite well 3 years back. Since then she has been suffering from blackish patches in forehead and in both thighs, bleeding from nose and menorrhagia since 3 years. Doctor diagnosed as ITP and started treatment. Patient underwent treatment but could not get relief completely.

Past history of Patient

The patient had past history of dengue fever 3 years back. Her family history revealed that there was no such complaint ever.

General Examination

Pulse: 76/min

BP: 110/80 mmHg

Temp: 98.4 F

RR: 16/min

Pallor: Present

Icterus, Cyanosis, Clubbing: Absent

Systemic Examination

CNS: Conscious, Oriented

CVS: S1 S2, Normal

RS: AEBE, Clear

P/A: Soft, Non Tender

Personal history of patient

Appetite - Decreased; Sleep- Normal; Bowel- Clear; Bladder- Clear; Addiction- None; Diet- vegetarian; Menstrual History - 4-5days/28-30 days; clotted with heavy bleeding.

RESULTS

There was marked and rapid improvement in blackish patches present in forehead and in both the lower legs, bleeding from nose and Menorrhagia.

There was marked and rapid improvement in following investigations as shown in table 1.

Table 1: Showing improvement in investigations

Sr. No.	Investigations	Before treatment (21.12.2017)	After treatment	
			After 3 months (25.04.2018)	After 7 months (14.06.2018)
1.	Hb (g/dl)	10.2	10.9	13.2
2.	TLC(cells/cu mm)	6100	8400	9200
3.	NEUTROPHILS%	59	60	46
4.	LYMPHOCYTES%	30	31	37
5.	EOSINOPHILS%	03	01	01
6.	BASOPHILS%	00	00	00
7.	MONOCYTES%	08	08	16
8.	TPLC(Lac/ μ L)	0.11	0.29	0.79

Table 2: Showing oral medication

Formulation	Dose	Duration	Anupana
<i>Giloya swarasa</i> 10ml + <i>Durwa swarasa</i> 10ml	BD	7 months	-
<i>Ojaswani Churna</i> 2gm + <i>Shatvari Churna</i> 2gm + <i>Akik Pishti</i> 500mg + <i>Shudha Sphatika</i> 250mg + <i>Aamlaki Churna</i> 2gm	BD	7 months	With luke warm water

DISCUSSION

In this study *Giloya swarasa* and *Durwa swarasa* in equal amount was given for the treatment of ITP.

Acharya Bhavprakash has mentioned the action of *Giloya* (extract) as *Rasayana* (rejuvenation), *Sangrahi* (astringent), *Balya* (increases the strength), *Agnidipana* (increases digestive fire) and *Tridoshashamaka*⁵. It contains *Berberine* as principle component along with *Giloin*⁶. It has pharmacological action of Immunomodulation,

Anticogulation and Antineoplastic activity so it reduces the immunologic destruction of platelets and increased megakaryocytes in the bone marrow⁷.

Durwa (extract) has action as *Rasayana* (rejuvenation), *Sangrahi* (astringent), *Balya* (increases the strength), *Agnidipana* (increases digestive fire) and *Tridoshashamaka*⁸. *Durwa* grass contains crude proteins, carbohydrates and 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 dispigmentation of skin. Internally the plant is used in various diseases like bleeding in dysentery, piles, epistaxis, menorrhagia, diarrhoea and urinary tract infection⁹.

Ojaswani Churna contains *Ashwagandha*, *Amalaki*, *Shatavari*, *Yashtimadhu*, *Shweta musali*, *Bala*, *Gokshura*, *Sharkara* and *Gum of acacia* which has the property of *Rasayana* and *Balya* so it strengthens the immunity and helps in reducing the immunologic destruction of platelets.

Shatavari acts as *Raktapitashamaka* because it has *Madhura-Tikta Rasa*, *Guru-Snighdha Guna*.¹⁰ It is *Rasayana*, which improves health by increasing immunity, vitality and resistance, as *Balya* means a strength promoter, and *Jeevaniya*- an erythropoetic so it is used¹¹. Its use is also advocated in menorrhagia.¹² It contains Oligospirostanoside referred to as Immunoside which has action of antiinflammation.¹³

Akika is having *Kashaya* and *Madhura rasa*, *Sheeta Veerya*, *Madhura Vipaka* and *Saumya Guna* and act as *Pitta Shamaka* and *Rakta Sthambaka*.¹⁴ *Akik Pishti* can be made with *Gulab* or *ketaki* or *Chandana arka*. So it is indicated in *Pitta roga*, *Rakta pradara*, bleeding gums, *Rakta pitta*, *Raktasrava* and *Rakta shtivana*.¹⁵

According to *Acharya Rasvagabhatta*, *Shudha Sphatika* is having *Kashaya* and *Madhura Rasa* which pacifies the *Pitta dosha*¹⁶. On external application, it causes vasoconstriction which stops the bleeding. On internal application, it has action of *Raktastambhana* and *Yonisankochna*.

Aamlaki has *Amla*, *Madhura*, *Kashaya Rasa*; *Guru*, *Ruksha*, *Sheeta Guna*; *Sheeta Veerya*, *Madhura Vipaka* and it is *Rasayana*, *Tridoshashamaka*, especially *Pittashamaka*¹⁷. It is indicated in *Paittikavikara*, *Raktapitta*, *Raktavikara* and as *Shonitasthapana*. It contains vitamin C, carotene, nicotinic acid, riboflavine, Gallic acid, Tannic acid and glucose.

The combination of *Ojaswani Churna*, *Shatvari Churna*, *Akik Pishti*, *Shudha Sphatika* and *Aamlaki Churna* pacifies the *Pittadosha* and act as *Rasayana* so it strengthens the immunity and helps in reducing the immunologic destruction of platelets, *Raktashamaka* so it pacifies the *Raktadosha* and *Raktastambhaka* and *Raktasankochaka* so it stops the bleeding from nose and excessive menstrual bleeding and lightens blackish patches in forehead and in both lower legs.

CONCLUSION

Marked improvement was found in all the signs and symptoms of the disease. After completion of treatment there is marked increase in the Hemoglobin level and Total platelet count. It is an effort to understand the concept of *Tiryak raktapitta* applied in ITP.

So it can be concluded that combination of *Giloya* and *Durwa swarasa*, *Ojaswani churna*, *Shatavari Churna*, *Akik Pishti*, *Shudha Sphatika* and *Aamlaki Churna* can be used for the treatment of ITP. It should be assessed on a large scale with proper research protocols.

REFERENCES

1. Harsh Mohan Textbook of Pathology, by Harsh Mohan, Published by Jaypee Brothers Medical Publishers (P) Ltd New Delhi, Sixth Edition, Chapter 2010; 13:332.
2. Terrell DR, Beebe LA, Vesely SK, Neas BR, Segal JB, George JN. "The incidence of immune thrombocytopenic purpura in children and adults: a critical review of published reports". Am J Hematol. 2010; 85:174-80.
3. Agnivesa's Caraka Samhita Text Revised by Caraka and Drdhabala, Introduction by Shri Satya Narayana Sastri by Pt. Kashinatha Sastri, Dr. Gorakha Natha Chaturvedi, Part I, Published by Choukhamba Bharati Academy, Varanasi, Reprint ,Nidana Sthana, Chapter 2, Slok no 5, 2011, 619.
4. Agnivesa's Caraka Samhita Text Revised by Caraka and Drdhabala, Introduction by Shri Satya Narayana Sastri by Pt. Kashinatha Sastri, Dr. Gorakha Natha Chaturvedi, Part I, Published by Choukhamba Bharati Academy, Varanasi, Reprint ,Nidana Sthana, Chapter 2, Slok no 8, 2011, 620.
5. Bhavaprakash Nighantu by Shri Bhavamishra, Published by Chaukhamba Bharati Academy ,Varanasi,Reprint , Guduchyadi Varga, Chapter 3; 2002, 270-271.
6. Dravyaguna Vigyana by Acharya Priyavrata Sharma ,Published by Chaukhamba Bharati Academy ,Varanasi, Reprint ,Rasayana Varga, Chapter 9; 2011, 761.
7. Chaudhary N, Siddiqui MB, Azmat S, Khatoon S. "Tinospora cordifolia: Ethnobotany, phytopharmacology and phytochemistry aspects. "International Journal of Pharmaceutical Sciences and Research, 2013; 4(3):891-899. [INTERNET], [cited on 24 Nov], 2018.
8. Dravyaguna Vigyana by Acharya Priyavrata Sharma ,Published by Chaukhamba Bharati Academy ,Varanasi, Reprint ,Prajasthapana Varga, Chapter 7; 2011, 576.
9. Paul R, Mandal A, Gupta AK. "An updated overview on Cynodon dactylon (L.) Pers."International Journal of Pharmaceutical Sciences and Research 2012; 3(1):11-14. [INTERNET], [cited on 24 Nov], 2018.
10. Dravyaguna Vigyana by Acharya Priyavrata Sharma ,Published by Chaukhamba Bharati Academy ,Varanasi, Reprint ,Vrishyadi Varga, Chapter 7; 2011, 562.
11. Sharma K, Bhatnagar M. "Asparagus racemosus (Shatavari): A Versatile Female Tonic." International Journal of Pharmaceutical & Biological Archives 2011; 2(3):855-863. [INTERNET], [cited on 24 Nov], 2018.
12. Hemadri K, Rao SS. "Leucorrhoea and menorrhagia: tribal medicine." Ancient Science of Life 1983; 3(1):40-41. [INTERNET], [cited on 24 Nov], 2018.
13. Noorul H, Nesar A, Shaikh MZ, Khalid, Juber A. "Asparagus Racemosus: For Medicinal Uses & Pharmacological Actions". International Journal of Advanced Research 2016; 4(3):259-267 [INTERNET], [cited on 24 Nov], 2018.
14. Rasaamritam by Dr. Devnath Singh Gautam ,Published by Chaukhamba Surbharati Prakashana ,Varanasi, First Edition , Ratnavigyaniya Adhyaya , Chapter 8; 2008, 103-104.
15. Vidyashree, Gowda Shankar, Doddamani M.S."A Critical Review On Akika: An Uparatna". International Journal of Pharmaceutical Sciences and Research 2017; 8(5).[INTERNET], [cited on 24 Nov], 2018.
16. Ayurvediya Rasashashtra by Dr. Chandrabhushan Jha, Published by Chaukhamba Surbharati Prakashana, Varanasi, Reprint, Maharasoprasasadhanarasa Prakarana, Chapter 6;2013,256.
17. Dravyaguna Vigyana by Acharya Priyavrata Sharma ,Published by Chaukhamba Bharati Academy ,Varanasi, Reprint ,Rasayana Varga, Chapter 9;2011,758.