

# Case Report

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# Management of Livedoid Vasculopathy (a rare disease) through *Ayurveda* w.s.r. to *Vatarakta*: A Case Report

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# **ABSTRACT**

Livedoid vasculopathy is a rare disease. It is chronic, painful, thrombo-occlusive cutaneous vasculopathy that involve distal lower extremities and feet. Contemporary medicine has not as much result in treatment and recurrence of disease too. On the basis of pathogenesis and sign and symptoms it resembles like *Vatarakta*. In *Ayurveda*, *Vatarakta* is a type of *Vatavyadhi* develops due to *Margaavarana*. A single case study showing here, A 24 Year old female patient came with complaint of redness followed by itching over bilateral ankle joints, ulcers (recurrent) and unable to stand more than 15 minutes for past 6 months, approached to Kayachikitsa OPD of Ayurvedic hospital where she was treated on the principle of *Vatarakta* like *Raktamokshana* (bloodletting), *Shamana chikitsa* (internal medicine), and *Bahyaparimarjana* (Local application). The treatment was carried out for 2 months and satisfactory outcomes were come in the form of reduction in Sign and symptoms and improve the QoL (Quality of Life) of patient. *Ayurveda* provide better improvement in such disease

**Keywords:** Livedoid vasculopathy, *Vatarakta*, *Shaman chikitsa* (internal medicine), *Raktamokshana* (bloodletting).

# INTRODUCTION

Livedoid vasculopathy (LV), or livedoid vasculitis, is a hyalinizing vascular disease characterized by thrombosis and ulceration of the lower extremities. [1] It is a chronic, painful, thrombo-occlusive cutaneous vasculopathy that involves the distal lower extremities and feet. The main mechanism in the pathogenesis is hypercoagulability while inflammation plays a secondary role. [2] The pathogenesis of LV is unclear. The disease can occur either independently or in association with acquired or inherited thrombophilia or various systemic disease, autoimmune connective tissue disease, neoplasms. Clinical features include Livedoid skin changes (linear or angular, erythematous nodules), atrophic Blanche (smooth, ivory-white plaques), and ulceration. The classical triad of manifestations is livedo reticularis, leg ulcerations and atrophie blanche. [3] It is a rare disorder with an estimated incidence of 1: 1, 00,000.<sup>[4]</sup> Female are affected more often than male (3:1). It is most prevalent in people aged 15-50 years. [3] Although it is painful but not associated with any loss of life or limb. The diagnosis is confirmed through a skin biopsy that demonstrates characteristic vascular abnormalities, including intraluminal thrombosis, endothelial proliferation, and sub intimal hyaline degeneration. Treatment in conventional medicine is Anticoagulant, Anti-platelets, Fibrinolysis, Vasodilators, Anti-inflammatory, Immunosuppressant, other Supplements like IVIG (Intravenous immunoglobulin), Hyperbaric oxygen PUVA, (Psoralen plus ultraviolet A), Supportive measures and preventive measures like pain relief compression stockings, cessation of smoking, bed rest with leg elevation, normal saline soaks for the ulcers. [5] In Ayurveda, on the basis of sign and symptoms it can be correlated with Vatarakta. It is a clinical entity where Vata Dosha and Rakta Dhatu are afflicted by their own etiological factors like sedentary life style along with mental stress and consumption of unwholesome food. [6] Vata Dosha is provoked as a result of the blockage in the Srotasa (body channels) caused by the excessive increase of Meda and Kapha.[7] There are two types of Vatarakta i.e.: Utthana (Superficial type) and Gambheera (Deep Type) Vatarakta. [8] Clinical feature of Utthana Vatarakta like Kandu (Pruritus), Daha (Burning sensation), Ruk (pain), Ayama (Extension), Toda (throbbing pain), Sphurana, Akunchana (contractions), Anvita, Shyavarakta twaka (Dusky red or coppery coloration of the skin). Vatarakta is also known as Khudaroga, Vatabalasa, and Adhyavata.[9] Acharya Charaka has described various treatment modalities for Vatarakta is Basti (Enema), Raktamokshana (Bloodletting), and Bahyaparimarjana Chikitsa (external treatment).[10] The patient was successfully managed with Ayurvedic principle. Vatarakta can be considered as diagnosis for the present case and patient was treated on the line of management of Vatarakta. Here, a case report of successfully treated patient is given below.

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#### **METHODOLOGY**

It is a single case study.

# **CASE REPORT**

A 24 Year old female patient came for consultation to the OPD of Kayachikitsa on 23/11/2019 having complaint of redness followed by itching over bilateral ankle joints, ulcers and unable to stand more than 15 minute. Patient was suffering from the disease since past 8 years. Patient was absolutely healthy 8 years back gradually she felt redness followed by itching over bilateral ankle joint, sometimes burning and pain in ankle joint. Then she had consulted homeopathy physician for the same and took medicine for 2 years. She felt improvement in her problem but she stops the medicine for 1 year. After lapse of one year she had similar sequence of event at the same site. Meanwhile she had taking allopathic medicine from medical shop but when condition got worsen she had consulted in safadarjang hospital where she was diagnosed as Livedoid vasculopathy and took treatment for one and half year, She was treated with Tab Dobesil 500 mg bd, Tab Avil 25 mg bd, Tab Aspirine 75 mg HS and local application, she felt some improvement in her complaint but also felt giddiness during treatment. There were frequent relapse and remission of symptoms. Then she came to Kayachikitsa OPD for consultation in November 2019.

#### **Clinical Findings**

Personal history uncovered that the patient was a vegetarian with good appetite, sleep, micturition, and bowel. There was no any relevant family history. General physical examination uncovered that GC: Good, BP: 110/70 mmHg, P.R.: 72/min, regular, Temprature: Afebrile, Pallor–Icterus-Cyanosis-Clubbing-: Not present, JVP: Normal, Tongue: Clean, Trachea: Centrally placed, Thyroid: Not enlarged.

Patient had moderate built with body weight of 54kg and height of 152 cm. She had *Pitta-Kapha Prakrati* with *Madhyam Sara* (Optimum body

tissue), Madhyam Satva and Madhyam Samhanana (Optimum body built). She also had Madhyam Vyayamashakti (Medium capability of physical activities), Madhyam Aharashakti (Medium food intake), and Madhyam Jaranashakti (Medium digestive power). Neurological examination, cardio respiratory, musculoskeletal, and genitourinary system examinations were normal. On skin examination: Initial phase of LV is characterized by erythematous to purple maculo-papular lesions distributed symmetrically on the bilateral medial and lateral ankle joints and feet. Ulcerating lesion occasionally blistering and crusting may precede the ulceration. Later stages are marked by white or ivorycolored scar like plaques (Fig- 1) frequently with telangiectases at the edges; scars often appear to be stellate.

# **Diagnostic Focus and Assessment**

Patient was already diagnosed as a case of Livedoid vasculopathy on the basis of biopsy of the skin lesion.

Reduced in sign and symptoms of  $Vatarakta^{[11]}$ , images, and assess the  $DLQI^{[12]}$  (Dermatology Life Quality Index). The diagnostic and assessment criteria are shown in table- 2 and 3. And improvement in images.

## **Therapeutic Intervention**

The patient was treated on the line of management of *Vatarakta* like *Raktmokshana, Bahyaparimarjana chikitsa,* and *Shamana chikitsa.* Detail of management is shown in table- 1

# **OBSERVATION AND RESULTS**

Assessment before and after is shown in table- 2 and 3. Reduced in sign and symptoms of *Vatarakta*, assess the DLQI (Dermatology Life Quality Index), and improvement in images before treatment (fig: 1A-B-C), after one month (fig: 2D- E), after treatment (fig: 3F-G-H).

Table 1: Line of treatment

Type of treatment	Name of the drug	Dose	Time of	Duration	Anupana
			administration		
1.Abhyanga (Local application)	Pinda tail and Jatyadi Tail		Twice daily	1month	
2.Internal medication	1.Kaishora guggulu	2 Tab (1= 125 mg)	Two times, after food	1month	Lukewarm water
	2.Mahamanjishthadi kwath	30 ml	Two times, Before food	1month	Lukewarm water
	3. Giloya churna- Yavakshara- Shu.Gandhaka –Churna	3 g 250 mg 500 mg	Two times, After food	1month	Lukewarm water
	4.Cap Yashtimadhu	2 Tab (1=250 mg)	Two times, After food	1month	Lukewarm water
3.Jalokavacharana	•	•	<u>'</u>	1	<u> </u>
1 <sup>st</sup> sitting	Baseline				
2 <sup>nd</sup> sitting	After 15 days				

 Table 2: Sign and symptoms of Vatarakta

Subjective criteria	ВТ	AT			
Pain	3	1			
Burning sensation	1	1			
Malaise	0	0			
Objective criteria					
Tenderness	2	1			
Edema	2	0			
Local color changes in the skin	2	0			
Walking Ability	2	0			
Peripheral pulse	0	0			

Table 3: DLQI (Dermatology Life Quality Index)

	Score	ВТ	AT
No effect at all on patient's life	0-1		
Small effect on patient's life	2-5		
Moderate effect on patient's life	6-10	10	4
Very large effect on patient's life	11-20		
Extremely large effect on patient's life	21-30		



Fig 1: Before treatment (A, B, C)



Fig 2: After 1 month (D, E)

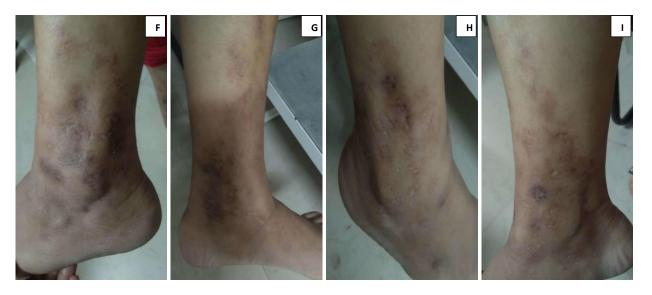


Fig 3: After 1 month (F, G, H, I)

#### **DISCUSSION**

Livedoid vasculopathy is a rare disease which hampered the daily life activities of the patient. On the basis of similarities in sign and symptoms the patient was diagnosed as Vatarakta. The Samprapti Ghataka observed in this case were as follow: Dosha: Vata Pradhana Tridosha, Dushya: Rasa, Rakta, Mamsa, and Meda. After considering all factors Vata Shamak, Rakta dushtihara, Srotoshodhaka treatment was planned. Jalokavacharana is a type of Raktamokshana (Bloodletting by leach) must be done where there is pain, burning, piercing, and pricking pain. Raktamokshana removes the obstruction of Vata due to that the normal Gati of Vata is attained and Shamana of Vatarakta. [13] Jaloka (leach) is also used in condition of vitiated Rakta by Pitta. The saliva of leeches contains a variety of substances such as hirudin, hyaluronidase, histamine-like vasodilators, and collagenase, inhibitors of kallikrein and superoxide production, and poorly characterized anesthetic and analgesic compounds. Therefore, a regional analgesic and antiphlogistic effect by these substances enforced by hyaluronidase as well as counter irritation might be possible. Leeches might be considered as an additional option in the therapeutic approach to vatarakta. [14] Kaishora Guggulu made up of many drugs having properties like Rooksha, Tikshna, and Ushna which act on Kapha Dosha and Meda Dhatu and Srotovishodhana so it reduces the Margavarana. Guggulu is the best drug for Meda Avruta Vata and pacification of Vata Dosha also.[10] Mahamanjishthadi Kwath contain many Vatahara drugs which are also anti-oxidant in nature and used in oxidative stress induced condition associated with Vata and Vatarakta.[15] Giloya churna is the drug of choice for Vatarakta and having Rasayana properties.[10] Yavakshara has properties of Kapha Meda Shamaka. Shuddha Gandhak are helping in Pitta Shamana and also having anti- inflammatory, antibacterial, antiviral, and antimicrobial properties. It also has healing property by blood purification. Tab Yashtimadhu has properties of Madhura Rasa, Sheeta virya, Madhura Vipaka and Vata-pitta Shamaka, Vrana Shodhana, Vrana Ropana.[16] It has proven healing, anti-ulcerogenic, anti-inflammatory and skin regeneration activitity. Sodium glycyrrhizate possessed anti- ulcer activity and stimulation of regeneration of skin.[17] Jatyadi Taila has properties of Vrana Shodhna and Vrana Ropana.

#### CONCLUSION

The main pathology of Livedoid vasculopathy can be considered as *Margavarana* and sign and symptoms same as *Lakshana* of *Vatarakta*. From the present case study result shows considerable improvement in her complaints and QoL. Here, an attempt is made to justify the principle of *Ayurvedic* management of Vatarakta. Through the *Ayurveda* we can give a hope for such condition.

### **Conflict of Interest**

The authors declare no conflict of interest.

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