

**EFFICACY OF AYURVEDIC MEDICINES AND RAKTAMOKSHAN IN
BUERGER'S DISEASE WITH SPECIAL REFERENCE TO UTTANA
VATARAKTA**

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ABSTRACT

Buerger's Disease is non-atherosclerotic inflammatory disorder and obliteration of arteries with involvement of neighboring vein and nerve, terminating in thrombosis of artery which leads to ischemia to that part causing severe pain, ulceration and gangrene. It's mostly seen in middle aged young males than females, smokers and tobacco users. In Ayurveda, it can be correlated with Vatarakta, where Vata Dosha and Rakta Dhatu is vitiated individually and then combined causing the symptoms of disease. **Methodology:** A 50yrs male patient, admitted in IPD having smoking history of 35yrs, known case of Diabetes Mellitus, Hypertension and Hyperlipidemia, having complaints of severe rest pain, burning sensation, swelling over left leg, foot and toes

since 2 months which got worsen gradually. Patient underwent Lumbar Sympathetic Block and was undergoing allopathic management where ulcer formation with discharge and further blackish discoloration over left great toe and 5th toe noticed which spread gradually. Considering this without interfering with previous allopathic treatment, patient was selected for Ayurvedic management. In this 6 times Raktamokshana, daily Vrana Shodhana, Ropana and Shamana Aoushadhi was given for first 25days followed by only Shamana Aoushadhi for next 45days. **Results:** Marked reduction in pain and use of Opioid Analgesics was seen. Improved Blood and oxygen supply prevented the chances of amputation. Spread of gangrene was controlled with complete healing. **Conclusion:** Buerger's Disease can be managed better with Ayurvedic approach providing good quality of life by reducing pain and harmful effects

of excessive analgesics usage.

KEYWORDS: Buerger's disease, Vatarakta, Raktamokshana, Vrana Shodhana, Vrana Ropana.

INTRODUCTION

The Buerger's disease is a segmental, progressive, occlusive, inflammatory disease of small and medium sized vessels with superficial thrombophlebitis often may present as Raynaud's phenomenon with micro abscesses along with neutrophils and giant cell infiltration. It is also known as Thromboangiitis obliterans which is very appropriate. It was first described by Winiwarter in 1879, but it was Leo Buerger who published in details about the disease in 1908 & 1924, hence named after him. This disease is very commonly seen in young middle aged males i.e. 20-40 yrs of age. It is not widely seen in females due to genetic reasons but can occur very rarely. It shows striking association with cigarette smoking, hence mostly seen only in smokers and tobacco users.^[18] Usually 20 or more cigarettes per day are required for this disease to occur. Hormonal influence, family history, hypersensitivity to cigarette, altered autonomic functions are probable causes where as lower socio economic group, recurrent minor feet injuries, poor hygiene are other factors which are responsible for this disease. The cardinal symptoms of this disease are rest pain, unremitting ischemic ulceration and gangrene of the digits of hands and feet.^[19]

Etiopathogenesis: Smoke contains carbon monoxide and nicotinic acid which forms carboxyhaemoglobin further causing initial vasospasm and hyperplasia of tunica intima. It leads to thrombosis and so obliteration of medium sized vessels causing Panarteritis, which is usually segmental. Later eventually artery, vein and nerve are together involved.

Here nerve involvement causes rest pain and then gradually features of ischemia of the limb can be seen. Once blockage occurs, plenty of collaterals open up depending upon the site of blockage. Through this collaterals blood supply is maintained to the ischemic area. If patient still continues to smoke, disease progresses to the collaterals by blocking them leading to severe ischemia. This is called as critical limb ischemia which causes rest pain, ulceration and gangrene.^[18]

Clinical features^[18,19]

1. Age group: 20-40 yrs.

2. It is smoker's disease and usually starts in lower limbs and then upper limbs, may first start on one side and later on the other side.
3. Intermittent Claudication in foot and calf: This is due to accumulation of irritant metabolites in the ischemic muscles. Cramps like pain noticed in calf muscles during walking or exercise. The distance that a patient can walk before onset of cramp is called as Claudication distance and it is good index of the level and severity of the obstruction.
4. Rest Pain: This pain known as 'cry of dying nerves' due to ischemia of somatic nerves, mostly felt in the forefoot and toes. In starting it is noticed at night, gradually getting more severe and ultimately occurring day and night.
5. Recurrent migratory superficial thrombophlebitis.
6. Absence/ Feeble pulse distal to proximal; Dorsalis pedis, posterior Tibial, Popliteal, Femoral artery. On palpation the most frequent finding is absence of posterior Tibial and Dorsalis pedis pulses in the feet. Absence of posterior Tibial pulse is highly suggestive of the diagnosis especially when bilateral. In upper extremity Radial pulse may be absent and when bilateral it is also suggestive of this disease.
7. May present as Raynaud's phenomenon i.e. stages of blanching, dusky anoxia and red engorgement.
8. Ulceration
9. Gangrene: usually dry and slow progressing, minor trauma may precipitate gangrene.

Investigations: CBC, Blood sugar, lipid profile, etc. (as required), Arterial Doppler and Duplex scan.

Treatment: Symptomatic and general management, vasodilators, Lumbar Sympathectomy, minor adjuvant surgery, care of ischemic parts, Amputation.^[18,19]

Cause of death: Hepatic failure due to long-continued used of sedatives, coronary or cerebral thrombosis (as part of Buerger's disease), toxemia from gangrene, exhaustion from severe pain, suicidal deaths to get rid of pain.^[19]

In Ayurveda, there is no specific evidence of Buerger's disease but on basis of its clinical presentation and pathogenesis it can be correlated with Vatarakta. Acharya Sushruta described this condition under Vatavyadhi, while Acharya Charak and Vagbhata assign a separate chapter for this disease. In Vatarakta, Vata dosha and Rakta dhatu gets vitiated separately due to Mithya (improper) Aahara and Vihara. This vitiated Rakta dhatu obstructs

the route of Vata which in return gets aggravated and again alter the Rakta dhatu. They both are responsible for this condition hence called as Vatarakta.¹ According to Acharya Charak, Vatarakta is classified in two kinds based on site of pathogenesis and predominance of doshas.

Depend on site of pathogenesis (also known as stages or types of Vatarakta):^[3,4]

- 1) **Uttana Vatarakta:** here Twak(skin) and Mamsa(muscle) are involved. It shows symptoms like itching, burning pain, painful movements and blackish discoloration of skin.
- 2) **Gambhira Vatarakta:** here all other Dhatus takes part in pathogenesis causing edema, stiffness, severe pain, burning, suppuration, joint pain, deformity in joints and numbness.
- 3) **Ubhayashrita:** Signs and symptoms of both above mentioned are present.

According to predominance of doshas, it is divided in 8 types; Vatadhikya, Pittadhikya, Kaphadhikya, Raktadhikya, Dwandwaj 3 types and Sannipatik.^[1,3]

In Vatarakta Vata dosha gets vitiated, aggravated and deranged by its own etiological factors, simultaneously its own factors vitiate Rakta dhatu. Due to the properties of Sukshmatwa & Saratwa of Vayu, Dravatwa & Saratwa of Rakta they spread all over the body i.e. in Strotas and Sandhi (joints) through Sira (vessels). Its sites of manifestation are hands, feet, fingers and toes, then spreads in the entire body. First it begins from the distal phalanges of feet and hands then spreads to all joints. Once localized it get associated with Pitta causes respective affliction by producing severe pain in respective joint. Different symptoms can be seen according to predominance of doshas. In Vatadhikya type it shows distension of vessels, pricking, throbbing and tearing type pain, dryness and blackish discoloration. Burning sensation, severe pain, excessive heat, red inflammation, pus formation etc is seen in Pittadhikya type. Whereas, in Kaphadhikya feet become cold, edematous, flabby, stiffness, heaviness and numbness is seen.^[3,4]

Treatment Principle includes Raktamokshana by using Shringa, Jalauka, Suchi, Alabu, Pracchana and Siravedha according to dosha and bala of Rogi. In Uttana Vatarakta, Acharya Charaka advised Aalepana, Abhyanga, Parisheka and Upanaha, whether in Gambhira Vatarakta use of Shodhana Chikitsa like Virechana, Aasthapana Basti and Sneha Basti is advised. Sushrutacharya advised Nirantar Raktamokashana i.e. bloodletting should be performed several times and Shodhana Karma should be done to expel out vitiated doshas.^[1,3]

A Case Report Study

A 50 yrs male patient came to OPD (13/02/2019) with complaints of

1. Pain & Burning sensation in left foot & toes - since 2 months and got severe in last 2 days.
2. Heaviness and Swelling on Left Toes, Foot and Leg - since 2 months.
3. Dryness and Redness over left toes - since 2 weeks
4. Insomnia due to Rest Pain - since 1 month

Past History: Hypertension- since 15 yrs, Hyperlipidemia- since 10yrs, Diabetes Mellitus- since 3yrs (on regular treatment), Hemiplegia (Right sided)- 3yrs ago (Ayurvedic treatment taken and got cured no complaints till date)

Addiction History: Smoking- 20 to 30 cigarettes per day since 35yrs, Alcohol Drinking since 30 yrs occasionally.

General examinations: (13/02/2019)P- 84/min, BP- 170/100mm of Hg, RR- 20/min, Temp -Afebrile, Jivha- Saam, Drika- Drishti kshin (Rt. Eye cataract), Sparsha- Anushna, Aakruti- Madhyama, Mala- Asamyak + Baddha mala (hard stools), Mutra- Sadaha + Peetvarni.

Systemic examinations: RS, CVS, CNS- NAD

Local examinations: (Before and after admission to IPD)

- Redness and Swelling over distal ½ of left foot with toes (**Fig. 1**)
- Dryness, severe pain
- Ulcer formation with discharge on 18/2/2019 (**Fig.2**)
- Blackish discoloration started in 2 spots on tip of great toe on 20/2/2019 with
- Blackish discoloration of 5th toe nail. (**Fig.3**)
- Loosening of nail from nail bed of Lt. great toe on 22/2/2019



Fig. 1



Fig. 2



Fig. 3

Investigations: (Table no. 1)

Date	Investigations
04/02/2019	BSL- 186.4 mg/dl (F) and 345.7 mg/dl (PP), HbA1c- 8.4, Total cholesterol- 215.4, Sr. Triglyceride- 229.8, TSH- 1.00, T3- 2.55, T4- 1.54
10/02/2019	Hb- 14.9 gm/dl, RBC- 5.00 mil/cmm, WBC- 11,900/cmm, Platelet count-220000/cmm, ESR- 40, Sr. Creat- 1.2 mg/dl, PT- 15 secs, INR- 1.27
10/02/2019	ECG- LVH with strain, 2D Echo- Normal,
	USG (A+P) – No abnormality seen
10/02/2019	Color Doppler - Lt. Lower limb arteries significant/almost complete atherosclerotic narrowing is seen involving superficial femoral artery, no color flow is seen in upper 2/3rd of superficial femoral artery. Another segment Narrowing is seen in lower 1/3rd of superficial femoral artery with raised velocities consistent with 50 to 75% stenosis.

Samprapti Ghatak

- Hetu : Aaharaj- Akala, Aniyamita bhojan, Dadhisevan, Viruddhahar, Viharaj- Long standing work daily (works in Clothing store), long route travelling, Ratraujagaran Manas- Krodha, Atichinta
Vyasan- Smoking- 20 to 30 cigarettes /day - since 35yrs, Alcohol – since 30 yrs.
- Dosha : Vata- Vyan Vayu, Pitta- Bhrajak, Rakta (according to Sushruta)
- Dushya : Rakta Dhatu, Twak, Mamsa Dhatu
- Srotas : Raktavaha Srotas
- Srotas Dushti- Sanga
- Agni : Jatharagni, Raktagni, Bhutagni
- Adhishthana : Twak, Mamsa
- Sadhya Asadhyata : Krucchra sadhya or Yapya
- Roga marga : Madhyama Rogamarga
- Vyadhi Vinishchaya -Vata- Pittaj Uttana Vatarakta

Events before Selection for Treatment: (Table no. 2)

Date	Events
13/02/2019	Daigned as Buerger's Disease (Left Foot) (with HTN, DM, Hyperlipidemia) Admission - Only Burning sensation and severe Pain at Left Toes Treatment - Antibiotics, Anti-hypertensive, Anti-diabetic, Statins, Anti-Coagulants, Oral + Opiod Analgesics
18/02/2019	L2-L3-L4 Lumbar Sympathatic Block give under L.A.- Temporary Pain Relief
	Formation of Ulcer at Lt. Great Toe with Discharge, Reddish Discoloration and Severe Pain at Lt. Great toe and 5th Toe
22/02/2019	Dry Blackish Discoloration (Gangrene) started at tip of Lt. Great toe with loosening of Nail from Nail bed and blackish discoloration of 5th Toe Nail with Severe Pain Patient Convinced for Ayurvedic Treatment with Previous Treatment Raktamokshana, Vrana Karma and Abhyantar Chikitsa Started

Treatment**Abhyantar Chikitsa**

1. Kaishor Guggul- 1gm TDS after meals (high dose considering the severity) with Warm water
2. Tapyadi Loha- 2 tab in powder form with Ghrita+Madhu BD after meals
3. Sahacharadi Kashaya- 20ml TDS with Warm water
4. Ushirasava- 30ml TDS with equal Warm water
5. Panchvalkal Kwath- Parishek of warm freshly made Panchavalkal Kwath over wound and fore foot.

Bahya Chikitsa

1. Raktamokshana- with Jalaukavacharan/Siravedh accordingly with interval of 2/3 days
2. Vranakarma- Dressing of wound with Haridra Churna + Jatyadi tail Pichu daily twice.
3. Snehan- Application of Jatyadi Tail over left foot with toes twice a day.

Pathya

1. Chapati, Bhakri, Rice, Moong Daal, Fruit Vegetables, Fruits, Milk and Goghрут.
2. Warm Water
3. Buerger's Position and Exercise, Shavasana, Ankle Rotation

Apathya

1. Lavana, Amla, Katu, Ushna Ahara, Kultha, Masha, Guda, Curd, Cold water, Fast food, Ajirnashan, Sheeth sparsha, Divaswap, Ratri jagaran, Alcohol and smoking.

This Treatment is given for 25 days (in IPD) and then after discharge from hospital Abhyantar chiktisa with Bahya Snehan continued for next 30 days.

Raktamokshana: (Table no. 3)

Date	Type	IPD/ OPD	Number / Size	Volume (approx.)	Rakta parikshana	Lakshana
23/02/19	Jalauka	IPD	1, Medium size	15ml	Dark, thick, Blackish red	Shool, daha, shotha shaman
25/02/19	Jalauka	IPD	2, Small size	30 ml	Dark, thick, Blackish red	Same, Varna prapti
01/03/19	Siravedha	IPD	20 no. Scalp Vein set	35-40ml	Dark, Blackish red till red color blood appears	Same
04/03/19	Due to fever not done	IPD	-	-	-	-
07/03/19	Patient discharged	-	-	-	-	-
09/03/19	Siravedha	OPD	20 no Scalp Vein set	15ml	Thick, Blackish red till red color blood appears	Same
11/03/19	Jalauka	OPD	1, Large size	30ml	Dark Red	Same
14/03/19	Jalauka	OPD	1, Large size	30- 35ml	Dark Red	Same

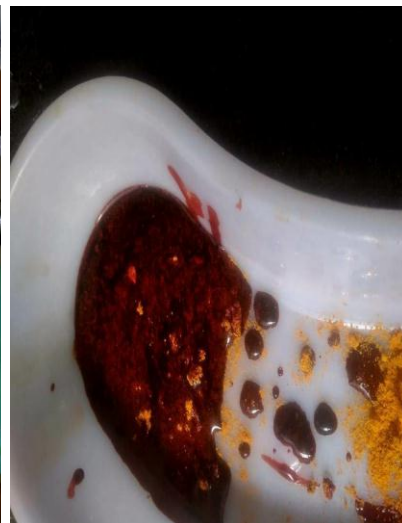


Fig. 4: Jalauka application. Fig. 5: Jalauka Vaman. Fig. 6: Removed blood.

OBSERVATIONS: (Table no. 4)

Symptoms	22/02 Day 0	23/03 Day 1 After R.M.	25/02 Day 3 After R.M.	01/03 Day 7 After R.M.	07/03 Day 13 On D.	09/03 Day 15 After R.M.	11/03 Day 17 After R.M.	14/03 Day 20 After R.M.	19/03 Day 25
Pain	++++	++++	+++	++	++	++	+	+	-
Burning Sensation	++++	+++	+++	++	+	++	+	-	-
Swelling	+++	++	++	+	-	-	-	-	-
Redness	++++	+++	+++	+	+	-	-	-	-
Dryness	++++	+++	+++	+	-	-	-	-	-
Local Temp.	++++	+++	++	++	+	+	normal	normal	normal
Loosening of nail with discoloration	++	+++	++	+	-	-	-	-	-
Spread of Dry Gangrene	2 small 5mm Spots on Grt. toe (Fig. 7)	7 mm With red Surroun ding Unheal thy tissue	10 mm Red surroun Ding unhealthy tissue	10mm Pink Healthy tissue (Fig. 8)	No spreading with healthy surrounding tissue (Fig. 9)	Dry Scab like	Dry Scab like (Fig. 10)	Dry scab like loosen from edges	Fall off scab and healthy tissue over Toe (Fig. 11)
Claudication	40-50m	50m	50 m	60-70m	100m	100-150m	250-350m	400m	500m
Dorsalis Pedis Artery	Unable to palpate Very feeble	Very feeble	Feeble & Palpable	++	+++	+++	+++	++++	++++
Post. Tibial Artery	Unable to palpate Very feeble	Very Feeble	Feeble & Palpable	++	+++	+++	+++	++++	++++
Use Analgesics	Opiod Analgesic (IV + Oral BD)	Relief for 6 hrs then (Oral+I V BD)	Relief For 6 hrs (Oral BD + IV OD)	Relief for 8 hrs (Oral BD + IV SOS)	(Only Oral BD)	Relief for 10 hrs (Oral OD)	Bearable mild pain (Oral SOS)	No	No
Sleep in 24 hrs	Disturb ed 3-4 hrs	Disturb ed 5-6 hrs	Disturb ed 5-6 hrs	Distur bed 6 to 8hrs	Undistur bed 8 hrs	Undistur bed 8 hrs	8-10 hrs	8-10 hrs	Sound sleep 8-10 Hrs

(abbreviations:- R.M.:Raktamokashana, D: Discharge)

Oxygen Saturation in left foot: (Table no. 5)

(SPO ₂) of Left Foot in %	22/02 Day 0	23/03 Day 1 After R.M.	25/02 Day 3 After R.M.	01/03 Day 7 After R.M.	07/03 Day 13 On D.	09/03 Day 15 After R.M.	11/03 Day 17 After R.M.	14/03 Day 20 After R.M.	19/03 Day 25
Great Toe	No reading	-	-	72	93	90	92	99 (Fig. 7)	99
2 nd Toe	92	97	97	98	97	98	98	97	98
3 rd Toe	92	97	98	97	98	98	97	97	97
4 th Toe	90	98	98	97	97	97	97	98	98
5 th Toe	No reading	-	-	85	93	92	96	99	98

RESULT

The above treatment showed significant results in managing the symptoms of Buerger's disease. Ulcer got reduced gradually and spread of gangrene was prevented after 7 days. Scab like dry gangrene fallen off by its own on 25th day with complete healing. Reduction in pain and use of Opioid analgesics was seen as I.V. Opioid analgesics stopped on 10th day and oral Opioid analgesics on 17th day. Patient is able to walk 500m without Claudication after 25 days of treatment. Patient is able to sleep 8-10 hrs undisturbed daily without rest pain. Pulsation of dorsalis pedis and posterior tibial artery improved and was well palpable after day 7, as in arterial occlusion with highly developed collateral circulation or in main artery stenosis distal pulse may be normal to palpable. Normal color of skin and nail with normal appearance of left foot and toes was noted which remained normal even after treatment till date. Marked reduction in raised blood pressure was also seen after Raktamokshana. Significant and remarkable results were seen in saturation of oxygen in left great and 5th toe which was absent and unable to read before, showed 75% and 82% respectively on 7th day of treatment. After 13 days, Spo2 was above 90% which showed the improved blood circulation to the affected toes and which is remarkable. Other conditions also got improved like improvement in food digestion, evacuation of bowel, normal micturition and quality of health was seen. After the 2 months of treatment, no reoccurrence was seen in any previous complaints regarding Buerger's disease till date.



Fig. 7: Day 0



Fig. 8: Day 7



Fig.9: Day 13



Fig. 10: Day 17



Fig 11: Day 25



Fig. 12: SPO2 on Day 20

DISCUSSION

Buerger's disease is not described in Ayurveda but, on basis of signs and symptoms it can be correlated with Vatarakta. After examining the patient, according to Dosha, Dhatu, Roga, Avatsha, and Bala; Raktamokshana, Vrana Karma and Abhyantar Chikitsa plan was selected. Raktamokshana was chosen as it is the major treatment for all Raktavaha strotogata vyadhi. Diseases occurring due to vitiation of Rakta Dhatu and Pitta Dosha shall be dealt with bloodletting. Feeling of lightness in body, alleviation of pain, lessening in severity of disease and joyful mind are the symptoms of proper Visravana.

Here, Raktamokshana is done by Jalaukavacharan and Siravedha. Raktamokshana was done by interval of 2/3 days as Acharya Sushruta advised Nirantara Raktmokshana in Vatarakta

and Bahudoshya Avastha.^[2,25]

Leech therapy- Saliva of leeches contains eglins and ellins acts as anti-inflammatory while histamine, acetylcholine and carboxypeptidase widen the vessels causing blood flow to that part (vasodilatation effect). It also has bacteriostatic property and anaesthetic effect so prevent growth of bacteria and deaden pain. Leech possesses various metabolically active substances in its saliva. It has hirudin, the anti-coagulant and an anesthetic also. Its bite is totally painless and also having proteolytic substances such as hyaluronidase and bdellin along with several others. When a leech bites, it causes prolong bleeding and reduction in clotting capacity of blood. The effects are not only localized but generalized in the body. It is the basic effects of leech bite in the patient.^[22,24]

Keeping in view the above benefits of leech and on the basis of ancient literature, we had started the treatment using leeches in Buerger's disease with internal medicines. It was effective and evident from the initial sitting of the leech therapy, that the severe excruciating rest pain was relieved better in the patient. The symptoms were vanished in a few sittings with no recurrence. The wound was healed gradually and the claudication distance was also improved to 500m due to which patient was able to move freely without the help.

According to Ayurvedic concept pain occurs due to vitiation of Vata Dosha, burning sensation occurs due to Pitta Dosha and Pus occur due to Kapha Dosha. Panchavalkal Kashaya Avgahana has properties like Vranaprakshalana, Vranaropana, and Shothahara.^[6,9] Jatyadi Tail for Snehan and Tail pichu with Haridra over wound showed soothing, cleansing, healing and antiseptic effect. Phytochemical evaluation of jatyadi tailam revealed presence of flavonoids, essential oils, tannins, glycosides and alkaloids while resins were found to be absent. HPTLC confirmed the presence of karanjin, lupeol in Jatyadi tailam. It was found to be non-irritant.^[10]

Kaishor Guggul was the main drug of choice, given in high dose 1gm TDS considering the Bahu Dosha avastha. It contains Guduchi having properties like Jwaraghna, Dahaprashamana, Vedanasthapana, Raktashodhaka, Raktavardhaka and Rasayana.

Guduchi acts as a blood purifier also possess restorative and alternative properties. It is a significant rejuvenation (Rasayana) drug which is recommended in certain diseases as a preventive as well as curative herbal remedy.^[5,20] Kaishor Guggul contains Triphala in double

quantity to flush out vitiated Doshas through virechana and Trikatu to improve Agni.^[8,11] Tapyadi Loha contains Loha, Suvarna, Makshika Bhasma and Shilajith which helps in elimination of avarana.^[12] Sahacharadi Kashaya is effective in management of Vata rogas, relieving pain, purifies and detoxifies the blood.^[14] Ushirasava acts as diuretics which expel out toxins. It contains Lodhra and Manjishtha like contents which are good for Rakta Dhatu. Jatamansi in Ushirasava helps in insomnia, also useful as antioxidant and Anti-diabetic.^[7,13]

CONCLUSION

Today, the cost of health care is constantly rising and affecting people's ability to afford it. Drug based medicines and other conventional treatments are being unaffordable for developing countries like India and problematic in the Western countries due to numerous side effects. Ayurveda treatment starts with an internal purification process, followed by special diet, herbal remedies, etc. The work in a well organized and co-ordinate manner with no bias can improve Ayurveda.

Buerger's disease is a very painful condition which disturbs the patient's lifestyle. Formation and spread of gangrene is responsible for amputation of that part which may badly affect the patient's health both physically and mentally. It can give a patient lifetime deformity. With the help of Ayurveda, if we are able to prevent the spread of disease and amputation, then it would be a great achievement.

In Ayurveda, no direct correlation of Buerger's disease with Vatarakta is made, but the clinical signs and symptoms it can be correlated with the Lakshanas of Vatarakta. In this Case study patient was diagnosed with Buerger's disease and correlated with Vata- Pittaj Uttana Vatarakta. Considering the Hypertension, Diabetes Mellitus, Hyperlipidemia and their regular allopathic medicines, above Ayurvedic treatment modality was adopted which provided encouraging results within month. Continuous usage of modern drugs for long duration causes toxicity in whole body so, there was an urgent need in application of Ayurvedic drugs in Vatarakta like conditions.

This case study gives an idea of line of treatment to be adopted considering the Dosha, Dushya, Roga Avastha, Rogi Bala, etc. and help to formulate a protocol for large sample studies.

REFERENCES

1. Shastri A., Sushruta Samhita, (Vol. – 1) 2016, Varanasi, Chaukhamba Sanskrit Sansthan, Chikitsa Sthana 5th Chapter (Mahavata vyadhi chikitsa) Page no.- 37- 41.
2. Shastri A., Sushruta Samhita, (Vol. – 1) 2016 (Vol. – 1) 2016, Varanasi, Chaukhamba Sanskrit Sansthan. Sutra Sthana 13th Chapter (Jalaukaavacharniya) Page no.- 57-61, 71.
3. Joshi Y. G., Charak Samhita, Chakrapanidatta Virachit, (Vol. – 2) 2005, Vaidyamitra Prakashan, Pune. Chikitsa sthana Chapter- 29, Page no- 656-672.
4. Srikanta Murthy K. R., Madhava Nidanam of Madhavakara, 2016, Varanaasi, Chaukhambha Orientalia, Chapter 23, page no: 90-92.
5. Dr. Gyanendra Pandey, Dravyaguna Vijnana, Part-1, 3rd Edition, 2005, Varanasi, Chowkhamba Krishnadas Academy, 697-702, 705, 707- 709.
6. Bhagwan Das, Ram karan Sharma, Ayurveda Dipika English commentary, 11th edition, Panchavalka kashayam Chapter 25/87.
7. Shashtri A., Bhaishajya Ratnavali, Vidyotini Hindi commentary, Chaukhamba Prakashan, Varanasi, Raktapitta Chikitsa verse 162-166, page no. 407.
8. Shashtri A., Bhaishajya Ratnavali, Vidyotini Hindi commentary, Chaukhamba Prakashan, Varanasi, Vatarakta Chikitsa verse 104-108, page no. 598.
9. Shashtri A., Bhaishajya Ratnavali, Vidyotini Hindi commentary, Chaukhamba Prakashan, Varanasi, Vatarakta Chikitsa verse 104-108, page no. 844.
10. Prof. Siddhi Nanadan Mishra, Bhaishajya Ratnavali, Siddhiprada Hindi commentary, 2015, Chaukhamba Surabharati Prakashan, Varanasi, page no. 825.
11. Prof. Siddhi Nanadan Mishra, Bhaishajya Ratnavali, Siddhiprada Hindi commentary, 2015, Chaukhamba Surabharati Prakashan, Varanasi, page no. 582.
12. Prof. Siddhi Nanadan Mishra, Bhaishajya Ratnavali, Siddhiprada Hindi commentary, 2015, Chaukhamba Surabharati Prakashan, Varanasi, page no. 414.
13. Prof. Siddhi Nanadan Mishra, Bhaishajya Ratnavali, Siddhiprada Hindi commentary, 2015, Chaukhamba Surabharati Prakashan, Varanasi, page no. 402.
14. Dr. D. B. Panditrao, Sahasrayoga, Hindi translation, 2011, Kendriya Ayurveda Vidgyan Anusandhan Parishad, New Delhi, Page no. 113.
15. Dr. Shailza srivastav, Sharangdhar Samhita, Hindi translation, 4th edition, 2005, Chaukhamba orientalia, Varanasi. madhyam khanda 2/15.
16. Ramkaran Sharma, Vd. Bhagwan Das, Ayurved Dipika English commentary, 11th edition, Panchavalkal Kashayam, ch- 25/87.
17. Prof. K. R. Srikantha Murthy, Vagbhata's Ashtang Hridayam, English translation,

- Chaukhamba Prakashana, Varanasi, 1995, Vata vyadhi Chikitsa ch 21.
18. Sriram Bhat M., SRB's Manual of Surgery 5th edition, The Health Sciences Publisher, 2017. Page no. 169-182.
 19. A. K. Nan, Undergraduate Surgery, 5th reprint October 2004, Academic Publishers, Kolkata, Page no – 89-104.
 20. Dr. Mansi M. and Dr. S. P. D., Dravyaguna vijyan; Chaukhamba Sanskrita Pratishthana 2009. Part 2 Guduchi, page no. 15.
 21. Makhan Lal Saha, Bedside Clinics in Surgery, The Health Science Publisher, 3rd edition 2014, Peripheral Vascular Disease, Ch- 8, Page 345-365.
 22. Praveen Kumar Chaudhary, Leech therapy in Thromboangiitis Obliterans (Buerger's disease), J. of Ayurveda and Hol Med (JAHM), 2015; 3(6): 130-134.
 23. Richa Singh, et.al, Critical Analysis of avasthanusar Vatarakta Chikitsa: A review. Int. J. Res. Ayurveda Pharm, 2018; 9(4): 125-128.
 24. Ekta, et.al, Ayurvedic management of Buerger's disease, International Research Journal of Pharmacy, 2013; 4(1): 112-115.
 25. Ranade S., Lele A, Raktamokshana-Bloodletting. Ayurvedic Panchakarma, Chaukhamba Sanskrita Pratishthan, Delhi, 2009, Page no. 124.