

**Case Study****MANAGEMENT OF BUERGER'S DISEASE THROUGH AYURVEDA- A CASE REPORT****Shikha Chaudhary^{1*}, Divya Kajaria², Rama Kant Yadava³**¹MD Scholar, ²Assistant Professor, ³Associate Professor, Department of Kayachikitsa, All India Institute of Ayurveda, New Delhi, India.**ABSTRACT**

The present case report was about a 50 year-old-male who was diagnosed with Buerger's disease which is a generalised occlusive vascular disease affecting predominantly males with special predilection to involve the lower extremities. He presented with complaint of unhealed ulcerations with pain and burning sensation in his right sole for 6 months but not getting satisfactory relief even after using conventional medications and advised to get done amputation. He visited the All India institute of Ayurveda and was treated for two months with a combination of Ayurvedic medicines and leech therapy which showed significant improvement in patients condition and eventually no recurrence was observed, ulcer healed completely with slight discolouration. This shows the effectiveness of Ayurvedic treatment including internal medicines administration and leech therapy in preventing amputation and treating other symptoms which may be useful for clinical practices.

KEYWORDS: Buerger's disease, Ayurveda, Medicinal Leech therapy (MLT).**INTRODUCTION**

Buerger's disease, also known as Thromboangitis obliterans (TAOs), is a rare disease of the arteries and veins in the arms and legs. It is an inflammatory occlusive vascular disorder involving small and medium-sized arteries and veins in the distal upper and lower extremities. It is more common among men than women. The disease is found worldwide, but the highest incidence of Thromboangiitis obliterans occurs in the Middle and Far East. The prevalence is higher in Asians and individuals of Eastern European descent. Although the cause of Thromboangiitis obliterans is not known, there is a definite relationship to cigarette smoking in patients with this disorder. The prevalence of the disease among all patients with peripheral arterial disease ranges from values as low as 0.5 to 5.6% in Western Europe to values as high as 45 to 63% in India, 16 to 66% in Korea and Japan, and 80% among Jews of Ashkenazi ancestry living in Israel. Part of this variation in disease prevalence may be due to variability in diagnostic criteria.^[1] There are no accurately defined treatments for TAO at present.^[2] TAO remains a systemic vasculitis strangely linked to smoking, which determines its occurrence, progression and prognosis by currently unknown mechanisms. Except for discontinuation of tobacco use, there is no other definitive therapy.^[3]

Case History

A 50 years old Indian, married, non-alcoholic male with a 20-year history of heavy cigarette smoking (UHID No. 333435) visited the Out-patient Department of Kayachikitsa (unit Rheumatology) at All India Institute of Ayurveda, New Delhi complaint of wound over little finger of right foot, presented with unhealed ulcerations with pain and burning sensation in right sole for 6 months. He had no history of foreign travel and familial problems. He was afebrile without history of trauma, allergies, or systemic disease. After smoking cessation and the oral administration of colchicine (0.5mg), prednisolone (10mg), hydroxychloroquine (400mg), and mycophenolic acid (360mg), his wound healing response was still poor.

Arterial Doppler B/L lower Limbs; defuse significant right ATA/PTA disease with parvus trades waveforms.

MR ANGIO Aorta and B/L Lower Limbs showed complete occlusion of right tibioperoneal trunk with poor distal reformation.

Carotid Doppler was normal.

Clinical Findings

In the presence of severe digital ischemia, trophic nail changes, painful ulcerations, and gangrene developed at the tip of the ring and little toes in the present case.

The pulsation of the bilateral dorsalis pedis arteries was normal in the physical examination. However, the computed tomography angiography showed occlusions of the bilateral posterior tibialis arteries at the level of the ankles. The patient's white blood cell and eosinophil counts, renal and liver function, immunoglobulin G, D-dimer, anti-phospholipid antibodies, and anti-neutrophil

cytoplasmic antibodies were all normal. Skin biopsy from the little finger not done.

Treatment modalities planned on the basis of condition tabulated in Table 1. Along with Internal medications, MLT was performed. Timeline has been shown in table 2. Comparison was done before and after treatment and tabulated in Table 3.

Table 1: Showing Interventions used with timeline

Intervention	Medicines Administered	Dose	Frequency	Duration
Oral	<i>Kaisor guggulu</i>	500 mg	BID	15 days
	<i>Triphala guggulu</i>	500 mg	BID	15 days
	<i>Dashmool Haritaki Avleha</i>	10 gm	BID	Next 15 days
	<i>Mahamanjisthadi Kwath + Guduchi churna</i>	20 ml + 3 gm	BID	30 days
	<i>Khadirarista</i>	15 mL	BID	30 days
Topical	<i>Panchvalkal Kwath + Sphatik bhasma</i>	Q. S.	BID	15 days
	<i>Jatyadi taila</i>	Q. S.	BID	30 days

Table 2: Leech Therapy Schedule

Blood Letting	Site	Duration
Baseline	Right foot 4th web space	30 mins
After 7 days	Right foot 1st and 4th web space	30 mins
After 15 days	Back of 4th web space and 10 inch above the right popliteal region	40 mins

Table 3: BT and AT Comparison

Domain	Method	BT	After 10 days	After 15 days
Pain	VAS	8	6	1
Claudication distance		70 mts.	110 mts.	>200 mts.
Distal pulses (ATA, PTA, PA)		Not palpable	Not Palpable	Feeble

ATA: Anterior Tibial Artery, PTA: Posterior Tibial Artery, PA: Peroneal artery

Table 4: Probable mode of action of Leech on TAO

Substance of leech	Action
Hirudin	Reduces factor VIII of coagulation allowing blood to flow freely and reduces hyper coagulation
Apyrase (Platelet anti-aggregate factor)	Thrombus destruction
Eglin (Anti-inflammatory)	Reduces the inflammatory process in the vessels
Bdellin (A protease inhibitor)	Dissolve foreign protein matrix and digests undue intimal wall of the blood vessel
Hyalurodinase	Diffuses the blood for free. Flow
Histaminase	Produces vasodilation action and promotes regeneration
Esterase (lipolytic substance)	Prevents hyper coagulation and reduces fat flow

		Baseline : Non-healed ulcer
		Day 7: Healed ulcer with minimal pain
		Day 15: Healed ulcer with mark, Discolouration reduced

DISCUSSION

Many treatments of TAO include prostacyclin, growth factors, sympathectomy, and surgical revascularization. Unfortunately, there is no accurately defined treatment.^[4] There is no specific treatment except abstention from tobacco. The prognosis is worse in individuals who continue to smoke, but results are discouraging even in those who stop smoking. Arterial bypass of the larger vessels may be used in selected instances, as well as local debridement, depending on the symptoms and severity of ischemia. Antibiotics may be useful; anticoagulants and glucocorticoids are not helpful. If these measures fail, amputation may be required^[5]. Amputation of a digit or a part is indicated when an ulcer refuses to heal, severe pain restricted to the affected digit and gangrene limited to the toe.

In present case study, the ulcer of patient was not healing inspite of tobacco stop and conservative medications. Along with internal medicine, MLT was planned to be done. The probable mode of action of MLT on TAO tabulated in table No. 04. The basis of MLT is to correct the pathological and hemodynamic disturbances and as well as to restore the normal

circulation in the affected limb which showed encouraging improvement in the present case, may be due to the possible synergistic action of leech enzymes which being capable of nullify the pathological sequence of TAO.

Based on sign and symptoms Buerger disease can be co related with *Vatarakta*. So local and systemic treatment was given to the patient as per text (explained under *Vatarakta* chapter). According to Ayurvedic concept pain occurs due to vitiation of *Vatadosha*, burning sensation occur due to *Pittadosha* and pus occur due to *Kaphadosha*. *Panchavalkala Kwath* and *Sphatikbhasma* was used for local wash followed by application of *Jatyaditail*. *Panchavalkala Kwath* pacifies *Vata-kapha* and having properties like *Vranaprakshalana*, *Vranaropana* and *Shothahara*. *Sphatikbhasma* mainly have *Shodhana*, *Stambhana*, *Shothahara* (anti-inflammatory) and *Vedanahara* (Analgesic) properties, which helped to relieve pain, local edema as well as to stop oozing and maintained local hygiene. *Jatyaditaila* was applied after wash on the affected part for soothing, and healing effect. Phytochemical evaluation of *Jatyaditaila* revealed

presence of flavonoids, essential oils, tannins, glycosides and alkaloids while resins were found to be absent. HPTLC confirmed the presence of Karanjin, lupeol *Jatyadi tailam*. *Jatyadi tailam* was found to be non-irritant.^[5]

For systemic treatment *Kaishorguggulu* and *Triphalaguggulu* balances *Pitta* and *Kapha*, particularly when it affects musculoskeletal system. Both create a detoxifying and rejuvenating effect aimed primarily at removing deep seated *Pitta* and *Kapha* from the tissues.

Mahamanjisthadikwath (MK) along with *Giloychurn* was given. MK is a classical Ayurvedic combination detailed in the context of *Vatarakta* in *Sahasrayoga*. The combination has a broad spectrum of activity ranging from *Astadasa kusta* (a wide spectrum of skin diseases), *Vatarakta* (rheumatoid arthritis), *Arditha* (bell's palsy) *Upadamsa* (venereal diseases), *Sleepada* (filariasis), *Prasupthi* (numbness), *Pakshaghat* (hemiplegia), *Medodosha* (diseases related to fatty depositions) etc. While *Giloychurna* having properties like anti-inflammatory, anti arthritic, anti allergic, anti oxidant, hepato-protective, immunomodulative and cardioprotective activity.^[6]

Khadirarishta used to correct discolouration while *Dashmoolharitakiavleha* used to maintain the effect as it has rejuvenating as well as *Srotoshodhan* activity.

CONCLUSION

The combined Ayurvedic treatment of prescribed medications along with parasurgical procedure viz. Leech therapy were promisingly helpful in treating the case of burger's disease. This

approach may be useful for clinical practices and may be taken into consideration for further research work.

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