

MANAGEMENT OF BUERGER'S DISEASE THROUGH AYURVEDA:- A CASE REPORT

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ABSTRACT

Thromboangiitis obliterans (Burgers' disease) is a non-atherosclerotic inflammatory disease of unknown etiology characterized by thrombosis and recanalization of the affected vessels, which has a strong association with tobacco. It usually affects small and medium-sized arteries and veins in distal upper and lower extremities. The onset of disease occurs between 40 and 45 years of age, and men are most commonly affected. The prevalence of the disease among all the patients with peripheral arterial disease varies from as low as 0.5%-5.6% in Western Europe to as high as 45%-63% in India. The present case study was on a patient who approached the OPD of Panchkarma, Govt ayurvedic Hospital Dharashiv, with chief complaints of pain and swelling in digits of the left foot from past 05 months along with

associated complaints of decreased sensation over left foot, left hand with bluish and blackish skin discoloration. The essential investigation such as ultrasound Doppler was done and diagnosed as a case of peripheral vascular disease (Buerger's disease). Based on clinical presentation, sign, and symptoms, it was diagnosed as a case of Vatarakta (~occlusive peripheral vascular disease) according to Ayurveda. The treatment principle of Vatarakta mainly includes Virechana (~therapeutic purgation Basti (~therapeutic enema), and Rakta-mokshana (~bloodletting by mean of leech application along with oral medications were advised. Patient showed significant improvement in the pain according to visual analog scale, skin discoloration, and other associated symptoms along with the positive changes in color Doppler of lower limbs. It shows that the therapeutic purgation with bloodletting therapy is an effective method for the management of thromboangiitis obliterans disease.

KEYWORDS: Leech therapy, Thromboangiitis obliterans, Vatarakta, Virechana Karma.

INTRODUCTION

Buerger's disease (thromboangiitis obliterans [TAO]) is an inflammatory occlusive vascular disorder involving small and medium-sized arteries and veins in distal upper and lower extremities. It is a non-atherosclerotic inflammatory disease characterized by thrombosis and recanalization of the affected vessels. The onset of disease occurs between 40 and 45 years of age, and men are most commonly affected. Cause of this disease is not known, but smoking is strongly associated with disease course and progression.^[1]

The prevalence of the disease among all the patients with peripheral arterial disease varies from as low as 0.5%–5.6% in Western Europe to as high as 45%–63% in India.^[2]

Histologically there are inflammatory changes in the wall of arteries and veins leading to thrombosis. Thrombosis occurs in small to medium-sized arteries and veins with associated dense polymorph nuclear leukocyte aggregation, micro abscesses, and multinucleated giant cells. The chronic phase of the disease shows a decrease in the hypercellularity and frequent recanalization of the vessel lumen. End-stage lesions show organized thrombus and blood vessel fibrosis.^[3]

Symptoms may include claudication (cramp such as pain) of the feet, legs, hands, and arms. The pain typically begins in the extremities, but may radiate to other parts of the body. Other signs and symptoms of the disease may include numbness and/or tingling sensation in the limbs, loss of hairs of affected parts, skin discoloration, skin ulcerations, and gangrene of distal parts. Progression of the disease leads to calf claudication and eventually ischemic rest pain and ulcerations on the toes, feet, or fingers.^[4] In Ayurveda, there is involvement of aggravated Vata Dosha along with Rakta Dosha in Vatarakta where normal flow of Vata dosha is obstructed by blood. On the basis of its clinical presentation and pathogenesis, it can be correlated with the disease occlusive peripheral vascular disease. In occlusive peripheral vascular disease, there is an obstruction to the normal flow of Vata by blood in blood vessels manifesting many clinical symptoms such as swelling, pricking pain, and blackish discoloration of skin starts mainly from distal part such as foot and hands.^[5] There is no specific treatment for the disease except abstinence from tobacco, regular exercise, and antiplatelet agents. In patients who are able to avoid smoking, disease remission is impressive and amputation avoidance is increased. The use of vasodilators, lumbar sympathectomy, and

aspirin may hold the progression of the disease for a while but that is not the permanent solution. Surgical procedures are not having that promising results, as there is often no acceptable target vessel for bypass.^[3]

If gangrene sets then amputation is the choice of treatment. In Ayurveda, the treatment principle of Vatarakta disease mainly includes therapeutic purgation, therapeutic enema, and bloodletting by leech therapy along with some oral medication which provides promising result in sign and symptoms of disease.

CASE REPORT

A 35-year-old male patient attended the OPD of Panchakarma(OPD No 33388) at Government ayurvedic hospital Dharashiv on 15 september 2023 with chief complaints of pain and swelling in digits of left foot past 05 months along with associated complaint of decreased sensation (numbness) over left toe with skin discoloration. He also had disturbed sleep in night because of pain. Patient had history of chronic smoking (more than 10-12 cigarettes per day since 5years). He had no history of high blood pressure and hypo\hyperthyroidism. No history of any injury or surgery. His appetite was poor, bowel movement little bit disturbed.

On examination, pain was moderate (as per visual analog scale [VAS]) and non-radiating in nature. The skin was bluish and blackish in color, thinner inconsistency shown in Figure 1. There was no ulceration, discharge, and foul smelling present in left foot. He was taking non-steroidal anti-inflammatory drugs (NSAIDs) occasionally but there was no significant relief.

Clinical Examinations

Inspection: Flattening of terminal pulp of toes, nails become brittle, flattened, and ridged.

Palpation: Palpation of peripheral arteries was done and noted as

Femoral artery—three positive (+++),

Popliteal artery—two positive (++),

Posterior tibial artery—two positive (++)

Dorsalis pedis artery—two positive (++)^[6]

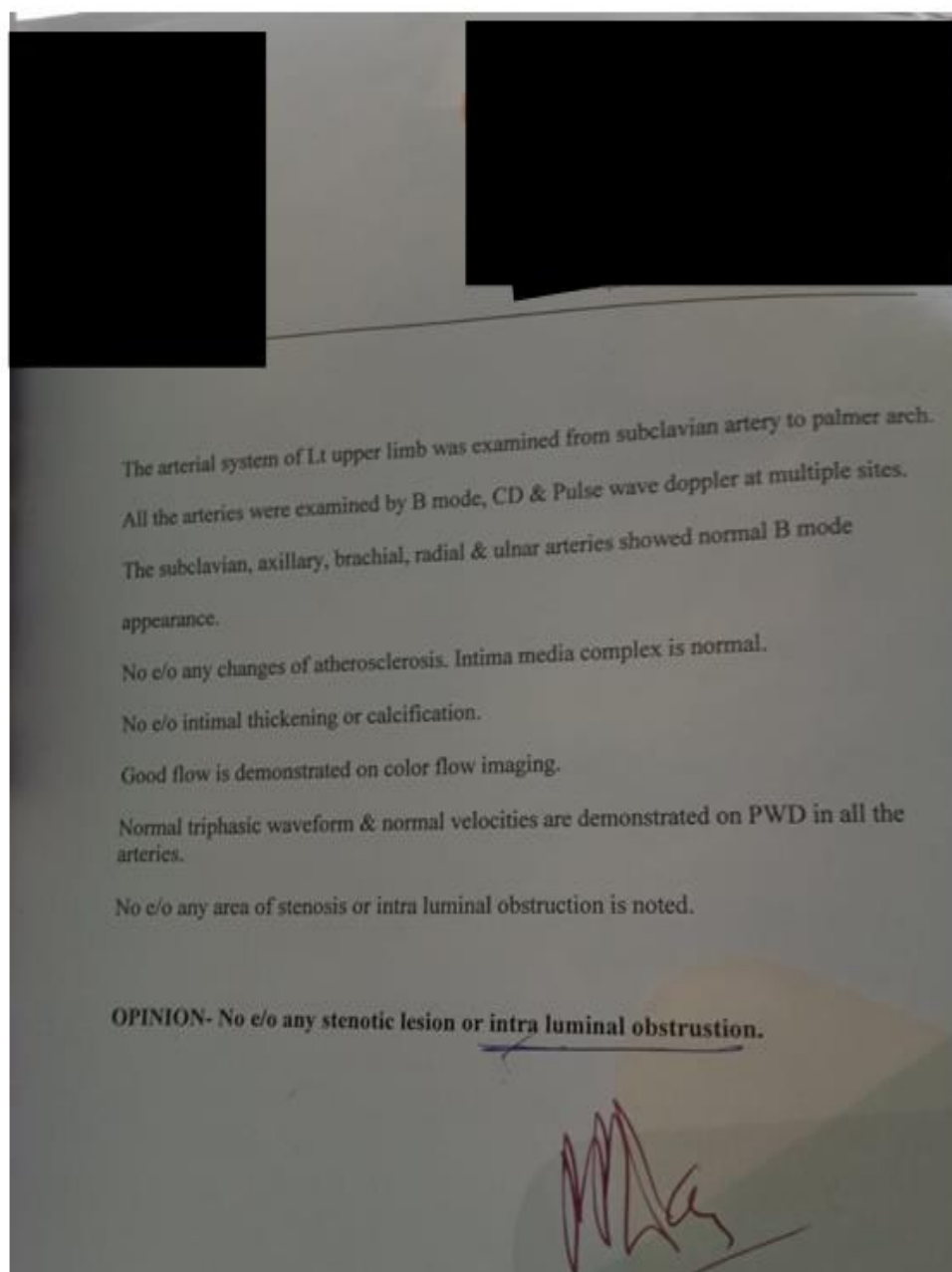
Investigation

Ultrasound Doppler(04 june 2023)— The arterial system of Lt upper limb was examined from subclavian artery to palmer arch.All the arteries were examined by B mode, CD & Pulse

wave doppler at multiple sites. The subclavian, axillary, brachial, radial & ulnar arteries showed normal B mode appearance.

No e/o any changes of atherosclerosis. Intima media complex is normal. No e/o intimal thickening or calcification. Good flow is demonstrated on color flow imaging. Normal triphasic waveform & normal velocities are demonstrated on PWD in all the arteries. No e/o any area of stenosis or intra luminal obstruction is noted.

OPINION- No e/o any stenotic lesion or intra luminal obstruction. [Figure 3].



Differential Diagnosis

1. *Amavata* is a disease in which vitiation of Vata Dosha and accumulation of Ama take place in joints. It starts from small joints of hands and spread to other parts of body, and it correlates with rheumatoid arthritis (RA) in modern science.

2. *Sandhigata Vata* is the most common form of the articular disorder. It is a type of Vata vyadhi which mainly occurs in Vriddhavashta due to Dhatukshaya, which limits everyday activities such as walking, dressing, and bathing. It mainly starts with weight-bearing large joints.

In Ayurveda, there is involvement of aggravated Vata Dosha along with Rakta Dosha in Vatarakta where the normal flow of Vata is obstructed by blood. It starts from the end parts of hands and feet. On the basis of the above examination, patient was diagnosed as case of *Vatarakta* as per Ayurveda and in modern science as (~Buerger's disease [TAO]).

Therapeutic Intervention

Before starting treatment, the written informed consent was obtained from the patient for publication of this case report and accompanying images.

Panchakarma Procedure Adopted

Purgation was carried out as per the classical method. Treatment was done as mentioned in Table 1.

Observation after Panchakarma procedures.

Madhyama Shuddhi (~moderate cleansing) observed with 19 Vegas (bowel movements) by purgation.

No any complications were observed.

After completion of Virechana Karma, following drugs were prescribed as mentioned in Table 2.

Table 1: Panchkarma Procedures Administered.

PROCEDURE	MEDICATION	DOSE	DURATION
Deepana - pachana	Aarogyavardhini vati	2 tab twice/day	First to third day
Abhayantra snehapana (oral intake of herbal medicated ghee in increasing dose)	Maha Tikta Ghritam	First day-30ml Second day-60ml Third day-90 ml Fourth day-120ml Fifth day-150ml	01 to 5 th September 2023
Sarvanga Abhayanga (whole Body Massage) Mrudu Peti Sweda	Balaguduchyadi tailam		6 th and 7 th september 2023
Virechan (therapeutic induced purgation with herbs)	1.Aarghvadhphala majja kwatha 2.Abhyadimodak tablet 3.Triphala kwath	150ml 03 Tablet 100ml	7 th September 2023
Samsarjana karma (specific dietetic schedule)	Peyadi samsarjana karma(Gradual supplement of different food)		5 Days from 07 th September to 12 september 2023
Raktamoshan (blood letting procedure)	By leech application	05 times (once a week)	07 th september to 12 october 2023
Manjishthadi Kshar yog Basti Anuvrasna Basti with Balaguduchyadi Taila		Continue 08 days Anuvrasna/niruha	15 September to 22 nd September 2023

Table 2: Oral medication administered.

Sr. No	Drugs	Dose	Time of Administration	Anupana	Duration
01.	Amalaki churna	03gms	Before meal in morning and evening orally	Luke warm water	30 days
02.	Bala choorna along with kawajbeech churna	03gms	Before meal in morning and evening orally	Luke warm water	30 days
03.	Trikatu vati	01 tablet	Before meal in morning and evening orally	Luke warm water	30 days
04.	Maha Manjishthadi kwath along with Guduchi churna	15ml/3gms	After meal in morning and evening orally	Luke warm water	30 days
05.	Maha Sudarshana kwatha	15ml	After meal in morning and evening	Luke warm water	30days

			orally		
06	Kaishor Guggulu	02 tab	After meal in morning and evening orally	Luke warm water	30 days
07	Arjun ksheer pak	15ml	After meal in morning and evening orally		15 days
08.	Pinda Taila	(Local Application)	Twice a day		30 Days
09.	Khadirarishta	15ml	After meal in morning and Evening	Luke Warm Water	30 days

Table 3: Assessment Parameters Before Treatment and After Treatment.

Sr. no.	Parameters	Before Treatment	After Treatment
1	Pain(Visual analog scale)	07	0
2	Swelling	Present	Absent
3	Skin colour	Bluish and Blackish	Normal skin colour
4	Sensation(Numbness)	Reduced	Improved

**Figure 1: Image of affected Foot before treatment.**



Figure 2:-Jaluka avacharan at affected side of foot.



Figure 3: Image of affected Foot After treatment.

Clinical Examinations

After completion of 1 month of total Ayurveda therapy (Shodhana and Shamana Chikitsa), the patient got complete symptomatic relief in pain and swelling as shown in Table 3.

Skin color and sensation were also improved as shown in Figure 3.

He got a significant improvement in the peripheral pulsation of Dorsalis pedis artery of left lower limb.

DISCUSSION

The present case was diagnosed case of Buerger's disease having pain in left great toe with swelling, numbness, and blackish discoloration of skin of the great toe. Based on the clinical presentation in particular and all other findings in general It was diagnosed as a case of Vatarakta according to Ayurveda. Occlusive peripheral vascular disease caused due to Rakta Dushti (impure blood) and vitiation of Vata Dosha. Properties of blood are similar to Pitta. Therapeutic purgations considered best in treating Pitta and blood disorders. Therapeutic purgation specially indicated in the treatment of Raktavaha Shrotodushti and in the Chikitsasutra (~principle and treatment) of Vatarakta.^[12]

In this case, therapeutic purgation might have removed the obstruction in blood vessels and eliminated aggravated Pitta and clear the path for Vata Dosha. Thus, it reduced the pain and swelling, and improved the skin color. Maha Tiktaka Ghrita was used for internal oleation as it is specially indicated in Vatarakta. The contents of Maha Tiktaka Ghrita are Tikta Rasa Pradhana which are blood purifier and Pitta Shamaka.^[13]

Leeches sucks the blood where they applied and reduce the local pressure, so reduce pain and swelling. The saliva of Leech also contains various agents such as anticoagulants, anti-inflammatory, thrombolytic, anesthetic, and vasodilators, which affects positively in this disease to reduce inflammation and occlusion in the blood vessels. Hirudin and calin are the anticoagulant agents that effectively inhibit coagulation. Manjisthadi kwatha is a blood purifier, immune-modulator, and Vataraktahara.^[14] Kaishor guggulu is drug of choice for Vatarakta. It is antibacterial, antimicrobial, anti-inflammatory, and Rakta Prasadaka in property; therefore, it corrects vitiation of blood.^[15] Guduchi is Tikta, in Rasa, and Madhura Vipaka which helps in Pitta Shaman and is immune modulatory, antioxidant.^[16] Amalaki and Mulethi are pitta shamak in nature and both of the drugs are specially indicated for the

treatment of Vatarakta.^[17,18] They also have rejuvenation properties, by which they improve the immune response of body.

Khadirarishta is very effective in all types of skin disorders .It mainly contains khadira which is potent Krumighna and kandughna dravya.^[19] The Bark of khadira(Acacia Catechu) possesses antifungal,antimicrobial,anti-inflammatory,and antioxidant Properties^[20]

CONCLUSION

The results revealed that Buerger's disease and other peripheral vascular diseases can be cured effectively with the collaborative approach of various Panchakarma procedures, including therapeutic purgation along with Leech therapy and Shamana Chikitsa. This case report is only an observation and based on the result, this case opens a new lead to conduct research with a large sample size with this intervention in the management of Buerger's disease.

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Conflicts of Interest

There are no conflicts of interest.

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