

BUERGER'S DISEASE IN PATIENT WITH DIABETES MELLITUS - CASE STUDY

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ABSTRACT

Buerger's disease [Thromboangiitis Obliterans] is a non-atherosclerotic inflammatory disease of unknown etiology, which has a strong association with tobacco. We present here one case of Buerger's disease associated with type II Diabetes Mellitus successfully treated with the help of ayurveda management.

INTRODUCTION

Thromboangiitis Obliterans (TAO), also known as Buerger's disease, was described in 1908 when Buerger published his classic paper and later his book in 1924 [1]. It is a nonatherosclerotic inflammatory disorder of unknown etiology that affects small and medium-sized vessels of the extremities and has a strong association with smoking [2], [3]. This panarteritis affects men ages between 25 and 35 years and can involve arteries, veins and nerves of arm and legs [1]. Extraordinary manifestations of TAO can involve the gastrointestinal, cerebrovascular, coronary and renal arteries [4], [5].

PATHOPHYSIOLOGY -

The pathological features accompanying TAO are categorized in three phases including acute, subacute and chronic, according to the thrombus pattern and the nature of the inflammatory cells. In contrast to other forms of vasculitis, the normal structure of the affected vessel, and particularly the internal elastic lamina, remains intact in all three phases of TAO [8].

The main characteristic of the acute phase is a hypercellular and inflammatory thrombus with minimal inflammation in the vascular wall of the affected vessel. In this phase, the polymorphonuclear (PMN) leukocytes are predominant cells at the site of inflammation, which may form microabscesses within the thrombus. However, in the subacute phase, PMNs in the microabscesses are surrounded by a granulomatous inflammation, which may lead to organization and recanalization of the

thrombus. Finally, the mature thrombus with vascular fibrosis is observed in the end-stage phase [9].

Although smoking is considered to be the most important risk factor of TAO, the essence of this relationship remains unclear until now. Endothelial cells play a key role in initiation and perpetuation of the inflammatory response and endothelial dysfunction in turn is reflected by impaired endothelium-dependent vasorelaxation, observed in studies on forearm blood flow [10], [11].

Diagnosis

While no tests can confirm whether you have Buerger's disease, your doctor will likely order tests to rule out other more common conditions or confirm suspicion of Buerger's disease brought on by your signs and symptoms. Tests may include:

Blood tests

Blood tests to look for certain substances can rule out other conditions that may cause similar signs and symptoms. For instance, blood tests can help rule out autoimmune diseases such as scleroderma or lupus, blood-clotting disorders, and diabetes.

The Allen's test

Your doctor may perform a simple test called the Allen's test to check blood flow through the arteries carrying blood to your hands. In the Allen's test, you make a tight fist, which forces the blood out of your hand. Your doctor presses on the arteries at each side of your wrist to slow the flow of blood back into your hand, making your hand lose its normal color.

Next, you open your hand and your doctor releases the pressure on one artery, then the other. How quickly the color returns to

your hand may give a general indication about the health of your arteries. Slow blood flow into your hand may indicate a problem, such as Buerger's disease.

Angiogram

An angiogram helps to see the condition of your arteries. An angiogram can be done non-invasively with the use of CT or MRI scans.

Or it may be done by threading a catheter into an artery. During this procedure, a special dye is injected into the artery, after which you undergo a series of rapid X-rays. The dye helps make any artery blockages easier to see on the images.

Your doctor may order angiograms of both your arms and your legs – even if you don't have signs and symptoms of Buerger's disease in all of your limbs. Buerger's disease almost always affects more than one limb, so even though you may not have signs and symptoms in your other limbs, this test may detect early signs of vessel damage.



History of present illness :

61 year old male came to the OPD complaining of non-healing ulcers on his legs since 2 years. Patient is a known case of type II Diabetes Mellitus since 7 years. He was a chronic smoker for more than 40 years. Patient had a H/O varicose vein since 7 years and underwent surgery for the same. Thereafter due to his chain smoking, poor hygiene and improper wound management the wound got worse and the wound became an ulcer. Main complaints are also associated with pain in the foot area and pus discharges from the wounds. Pain aggravates during work and walking and relieves while resting. He doesn't want another surgery. So he came here for further management. While he admits here there was a big round ulcer in his both ankle area and right calf area along with pus discharge from the wound.

History of past illness :

Had a history of varicose vein 7 years back and underwent surgery for the same.

EXAMINATION OF ULCER :



Local examination

Inspection

Size and shape - Big irregular shaped multiple wounds.

Number - 2 to 3 wounds

Position - Medial part of both ankles and right calf region.

Edge - Sloping edge is seen.

Floor - Wash leather slough present on the floor.

Discharge - Slight pus discharge.

Surrounding area - Surrounding area of the ulcer is eczematous and black pigmented.

Whole limb - Presence of varicose veins on both legs.

CASE STUDY DETAILS-

Particulars of the patient :

Name - Easwaran v

M R No : 81520

Age - 61

Sex - Male

Marital status - Married

Address - Selvapuram , Tamil nadu

Occupation - Dairy farm management

Economic status - Middle class

Chief Complaints :

C/O non healing ulcer on medial malleolus of both left and right ankles , and medial part of right calf.

Duration : 2 years

Associated with type II Diabetes Mellitus since 7 years and varicose vein in both legs since 7 year.

Was under our medication for type II Diabetes Mellitus since 5 years

Personal history :

Bowel - Regular , sometimes constipated.

Appetite - Good.

Micturition - Diurnal : 5-6 times per day

Nocturnal : 3-4 times per night.

Sleep - Good

Diet - Mixed diet

Addictions - Smoking (8 packets of beedi per day)

Alcoholic - 4-6 pegs per day

General examination :

Pulse - 74 /mins

Temperature - 98.6 ° F

BP - 130/90 mmHg

RR -18/ mins

Height - 162 cm

Weight - 63 kg

Palpation :

Tenderness - Grade 2 tenderness on palpation

Edge and margin - Sloping edge, 2nd degree induration or thickness on the margin.

Base - Slight induration on the base, and patient felt much pain while touching on the base.

Depth - 5mm deep.

Bleeding - No bleeding present

Relation with deeper structures - No fixity to other structures.

Surrounding skin - Increased temperature and Grade 2 tenderness and black pigmented area's on the surrounding skin .

Examination of vascular insufficiency :

Varicose vein present on both legs, so there is an insufficiency.

Investigations or Special Test :

Venous Doppler suggests Buerger's disease

Buerger's postural test - Positive

Diagnosis :

Buerger's Disease.

Buerger's disease is a vascular disease characterized by occlusion of small and medium sized arteries.

C/F:

Foot claudication

Claudication of calf, thigh and buttocks while walking

Color changes.

Nail changes

Etiology :

Modern management :

Conservative management	Surgical management
Stoppage of smoking	Direct arterial surgery
Care of feet	Profundoplasty
Gene therapy	Amputation
Drugs : low dose aspirin prostaglandin therapy analgesics sedatives	Omental transfer

Cigarette smoking ≥ 20 cigarettes /day

Prolonged standing

Unhygienic conditions

Systemic hyper coagulopathy

PATHOGENESIS :

Smoking-CO & Nicotinic acid (Carboxyhaemoglobin)

Vasospasm and hyperplasia of blood vessels

Thrombosis and obliteration

Features of ischemic limbs

Plenty of collaterals open up and supply maintained[Compensatory peripheral vascular disease]

Continuous smoking-collaterals affected-severe ischemia.[Decompensatory peripheral vascular disease]

Thromboangiitis Obliterans

AYURVEDIC MANAGEMENT :

दुष्टव्रणेषु कर्तव्यमूर्ध्वं चाधश्च शोधनम् षड्
विशोषणं तथाऽहारः शोणितस्य च मोक्षणम्

Sodhana, Soshana and Rakthamokshana

Medications given throughout the treatment :

Nimbadi Kashayam., Manjishtadi Kashayam., Aragwadharishtam.,

Khadirarishtam., Kanchanara Guggulu , Gandhaka Rasayanam

tablet, Dermafex Capsul, Dasamoola , Hareetaki lehyam,

Managements we done here :

Kaphakutara Rasa, Guggulu panchapalam churnam, Thriphala

Guggulu and Guggulu tiktakam ghritham

Jathyadi Ghritham - External application on wound

WH 5 ointment - External application



Externally:



Avasechana - Kshalana with Naalpaamaradi kashayam.
Raktha Sodhana - done with JALOUKA
Bandhana with Bactigras gauze and WH5 application.
1st stage :
Nimbadi ks - 15ml ks + 30 ml lukewarm water BID B/F
Araghwadharishtam + Khadirarishtam 30 ml bid A/F
Kanchanara guggulu 1-0-1 A/F

Gandhaka rasayana 1-0-1 A/F
Guggulu tikthakam ghritham 1 tsp -0 - 1tsp A/F
Dasamula hareetaki lehyam 2 tsp bedtime A/F
Kaphakutara rasa 1-0-1 A/F
Dermafex capsule 1-0-1 A/F
WH 5 ointment E/A



2nd stage :
Kanchanara guggulu 2-0-2 A/F
Thriphala guggulu 2-0-2 A/F
Dermafex capsule 2-0-2 A/F
WH 5 ointment for E/A
Guggulu panchapala churnam 1tsp -tsp -1tsp with lukewarm water.



3rd stage :
Manjishtadi k.s 15 ml K S + 45 ml lukewarm water
Araghwadhasavam + Khadirarishtam 30 ml bid A/F
Dermafex capsule 1-0-1 A/F
Jathyadi ghritham for E/A
Diet plan during the treatment :
Avoid black gram mixed foods.
Avoid more spicy food , sour items and more acidic foods.

DISCUSSION

Nimbadi Kashayam acts on kapha dosa, its mainly used in skin diseases and diseases due to toxins accumulated in the body. It is antibacterial, antifungal, detoxifier for whole body and blood purifier.

This kashayam enhances healing process and fight of infections associated with boils or carbuncles. It is useful in diabetes mellitus. It does not only lower blood glucose levels but also can be helpful in complication of diabetes mellitus. It helps to reduce neuropathy, nephropathy and retinopathy. Manjishtadi kashaya possess effective blood purifying properties and antioxidant effect along with the ability of detoxification and rejuvenation of the body too. Aragwadadi Arishta speeds up recovery from ulcers, wounds, and other skin eruptions by detoxification of blood and reducing toxins.

Kanchanara guggulu and Gandaka rasayanam are two other medications which helps in faster wound healing and treats chronic skin diseases. Dashamoola hareetaki lehyam by its medohara and immunomodulatory action enhances the treatment. Guggulu panchapala churnam, which is tvachyam is also seen effective in non healing ulcer along with its kaphahara medohara action was seen to be in this patient with non healing ulcer along with diabetes mellitus. Glymin plus tablets were also given to patient to control his blood sugar levels. Jathyadi gritham and Wh5 cream known as wound healing experts were also advised to this patient to enhance faster wound healing.

CONCLUSION

Buerger's Disease is a medical condition of unknown cause, inextricably linked to tobacco abuse. Currently, complete abstinence from the use of all tobacco is the corner stone of management. It can be cured with successful classical ayurveda chikitsa as mentioned below.

By external therapies like kshalana with Nalpaamaradi Kashaya brings the cleaning and debridement of the wound, while Jaloukavacharana makes the blocked Rakthavaha srotas open thereby brings proper blood supply to the parts.

By internal medications, it brings a sodhana ropana and sopahara effect and a fast wound healing.

By jathyadi ghrita and WH 5 ointment gives a wound healing effect and skin resurfacing effect.

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