

# Buerger's Disease- Ayurved Chikista -Case Study

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*Abstract- 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 neutrophil and giant cell infiltration, with skip lesions. Buerger's disease[Thromboangiitis Obliterans] is a non-atherosclerotic inflammatory disease of unknown etiology, which has a strong association with tobacco. More common in lower limbs than upper limbs Incidence is Very commonly seen in young and middle aged males (20 – 40 yrs.) Seen only in smokers and tobacco users . Hormonal influence, familial factors Hypersensitivity to cigarette, Altered autonomic functions, Lower socioeconomic group, Recurrent minor feet injuries, Poor hygiene. Pathogenesis Smoke- carbon monoxide and nicotinic acid Vasospasm & hyperplasia of intima Thrombosis of vessels Obliteration of vessels Panarteritis – segmental Artery ,vein and nerve are together involved ,Nerve involvement due to blockage of vasa nervosa causes rest pain . Artery involvement leads to features like claudication pain. With blockage – plenty of collaterals open up Collaterals maintain the blood supply to the ischemic area this is known as compensatory peripheral vascular disease. Disease progression due to smoking leads to blockage of collaterals also leading to severe ischemia known as decompensatory peripheral vascular disease or critical limb ischemia. we present here one case successfully treated with the help of classical ayurveda management.*

**Keywords:** Buerger's Disease, Ayurved Chikista, Case Study

## I. 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].

## II. 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 micro abscesses within the thrombus. However, in the subacute phase, PMNs in the micro abscesses 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. 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.

### III. CASE STUDY DETAILS

#### *Particulars of the patient :*

- Name – Mr.Prakash Mali
- M R No : 248505
- Age – 38 yrs
- Sex – Male
- Marital status – Married
- Address – bibwewadi , pune
- 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 varicose vein in both legs.



History of present illness :

- 38 year old male came to the OPD complaining of non healing ulcers on his legs since 2 years.
- Patient was not a known case of any metabolic disorders like HTN,DM and Dyslipidemia...
- He was a chronic smoker for more than 10 years.
- Patient had a H/O varicose vein since 3 years and underwent surgery for the same.
- Thereafter due to his chain smoking , poor hygiene , and improper wound management the wound got more 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 3 years back and underwent surgery for the same.

Personal history :

- Bowel - Regular, sometimes constipated.
- Appetite - Good.
- Micturition - Diurnal : 3-4 times per day
  - Nocturnal: 1-2 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

EXAMINATION OF ULCER :



Local examination

Inspection

1. Size and shape - Big irregular shaped multiple wounds.
2. Number - 2 to 3 wounds
3. Position - Medial part of both ankles and right calf region.
4. Edge - Sloping edge is seen.
5. Floor - Wash leather slough present on the floor.
6. Discharge - Slight pus discharge.
7. Surrounding area - Surrounding area of the ulcer is eczematous and black pigmented.
8. Whole limb - Presence of varicose veins on both legs.

Palpation :

1. Tenderness - Grade 2 tenderness on palpation
2. Edge and margin - Sloping edge, 2<sup>nd</sup> degree induration or thickness on the margin.
3. Base - Slight induration on the base, and patient felt much pain while touching on the base.
4. Depth - 5mm deep.
5. Bleeding - No bleeding present.
6. Relation with deeper structures - No fixity to other structures.
7. Surrounding skin - Increased temperature and Grade 2 tenderness and black pigmented areas 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 :

- Cigarette smoking  $\geq$  20 cigarettes /day
- Prolonged standing
- Unhygienic conditions
- Systemic hyper coagulopathy
- PATHOGENESIS :
- Smoking-CO & Nicotinic acid (Carboxyhemoglobin)
- 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

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

#### IV. AYURVEDIC MANAGEMENT

‘‘दुष्टवणेषु कर्तव्यमूर्ध्वं चाधश्च शोधनम् ८६  
विशेषणं तथाऽहारः शोणितस्य च मोक्षणम्’’

- Sodhana
- Soshana
- Rakthamokshana

Medications given throughout the treatment :

- Nimbadi Kashayam.
- Manjishtadi Kashayam.
- Aragwadharishtam.
- Khadirarishtam.
- Kanchanara Guggulu
- Gandhaka Rasayanam tablet
- Dermafex Capsule
- Dasamoola Hareetaki lehyam
- Kaphakutara Rasa
- Guggulu panchapalam churnam
- Triphala Guggulu
- Guggulu tiktakam ghritham
- Jathyadi Ghritham - External application on wounds
- WH 5 ointment - External application
- Managements we done here:

Externally:





2<sup>nd</sup> stage :

1. Kanchanara guggulu 2-0-2 A/F
2. Thriphala guggulu 2-0-2 A/F
3. Dermafex capsule 2-0-2 A/F
4. WH 5 ointment for E/A
5. Guggulu panchapala churnam

1tsp -1tsp -1tsp with lukewarm water.

- Avasechana – Kshalana with Naalpaamaradi kashayam.
- Raktha Sodhana – done with JALOUKA
- Bandhana with Bactigras gauze and WH5 application.

1<sup>st</sup> stage :

1. Nimbadi ks – 15ml ks + 30 ml lukewarm water BID B/F
2. Araghwadharishtam + Khadirarishtam 30 ml bid A/F
3. Kanchanara guggulu 1-0-1 A/F
4. Gandhaka rasayana 1-0-1 A/F
5. Guggulu tikthakam ghritham 1 tsp -0 – 1tsp A/F
6. Dasamula hareetaki lehyam 2 tsp bedtime A/F
7. Kaphakutara rasa 1-0-1 A/F
8. Dermafex capsule 1-0-1 A/F
9. WH 5 ointment E/A





3<sup>rd</sup> stage :

1. Manjishtadi k.s 15 ml K S + 45 ml lukewarm water
2. Araghwadhasavam + Khadirarishtam 30 ml bid A/F
3. Dermafex capsule 1-0-1 A/F
4. 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.

## V. 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 bringing proper blood supply to the parts.
- By internal medications, it brings a sodhana ropana and sophahara effect and a fast wound healing.
- By jathyadi ghritha and WH 5 ointment gives a wound healing effect and skin resurfacing effect.

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