

AYURVEDIC MANAGEMENT OF TAO (BUERGER'S DISEASE) – A CASE STUDY

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ABSTRACT

T.A.O also called as buerger's disease or smoker's disease is a arterial disease. It is non-atherosclerotic inflammatory disorder involving medium sized and distal arteries.^[1] Mainly occurs in young males between ages of 20-40 years and is common in lower limbs. The common cause of the disease is smoking, so called as smoker's disease. In early stage it is unilateral but later involves both the limbs. Causes include hypersensitivity to cigarette, recurrent minor feet injuries, poor hygiene and altered autonomic functions.^[2] Sign and symptoms include intermittent claudication, discolouration of the involved limb, decreased local temperature, rest pain, ulceration and gangrene, absence/feeble distal pulses and recurrent superficial thrombophlebitis. Modern management of this disease includes conservative with use of vasodilators, pentoxifylline and low dose aspirin. Surgical management includes lumbar sympathectomy, omentoplasty, and if gangrenous stage is there then amputation is the choice³. These means of treatment are costly, not satisfying and associated with complications. In *Ayurveda*, the disease is not mentioned as it is but the features can be correlated with the *strotodushti lakshanas* like *sanga* and *siranam granthi*.^[4] Also there is vitiation of *rakta* so *raktavaha strotodushti*.^[5] is also involved. Hence, based on these two references the further treatment was planned. The management included *leech* therapy, *guduchi swaras orally* and *til taila dhara* locally. They helped to improve the vitiated *rakata*, maintained the collateral circulation and increased the micro circulation. All these means gave satisfactory results and the patient was able to do his daily activities without any trouble.

KEYWORDS T.A.O, *Raktavah strotasa*, *leech* therapy, *Guduchi swaras*, *Til tail dhara*.

INTRODUCTION

In this case the cause of the disease was excessive smoking, the smoking index was >300, which is at the higher risk to get the disease. As smoke contains carbon monoxide particles and nicotinic acid they combine with the blood and form carboxyhaemoglobin. Initially it causes vasospasm and hyperplasia of the intima later thrombosis in the vessels and thus obliteration to the blood flow.

Clinical features include ischaemic changes of the limb, discoloration, ulceration and gangrene. The use of vasodilators, aspirin may hold the progression of the disease for a while but is not the actual part of curative treatment. Surgical procedures are very costly and not having that promising results, if gangrene sets then amputation is the choice but loss of limb is not the choice for the patient.

In *Ayurveda* no specific correlation can be made with the diseases mentioned in the literature. But, considering the features of the T.A.O it can be said that it is vitiation of blood in the vessels and thus *strotodushti* especially

raktavah strotas is present. According to this concept the treatment is planned to remove the *sanga* i.e obliteration, *siranam granthi* i.e thrombus. These two things hold the pathology of the disease related to *ayurveda*.

Patient was treated with leech therapy, *guduchi swaras* and *til taila dhara*. The results of this regime gave complete relief to the patient without any complications and was cost effective.

Case study

A 48 years male patient

Occupation- driver

OPD No-4132

IPD No -1245

DOA- 23/1/2016

DOD- 24/2/2016

Address – Osmanabad

Chief complaints –

- Pain in left leg – since 2 years
- Discolouration of skin – since 1 year
- Intermittent claudication – since 1 year
- Rest pain – since 1 year

- Non healing ulcer over left great and second toe – since 6 months
- Mild discoloration of right leg - since 6 months
- Loss of hair of left leg- since 6 months

History of the patient-

The patient was asymptomatic before 2 years then he gradually developed intense pain of the left leg, which didn't allow him to do his daily work, intermittent claudication lead to painful walking. There was discoloration of the limb and an ulcer developed over the greater toe which did not healed. Patient has taken many modern opinions and treatment for the same but didn't get the relief so he attended the OPD of government ayurved hospital, Osmanabad and was planned the treatment.

Past history

No history of any major illness
 No history of DM/HTN/Asthma
 No history of any surgical illness
 History of drug allergy- patient was not known allergic to any drug or substance.
 Personal history-
 Diet-mixed
 Appetite-good
 Sleep- normal
 Bowel- normal
 Micturition- normal
 Occupation- driver
 Addiction-chronic smoking
 (10 packets of cigarette per day from 30 years)
 Tobacco chewing

Family history –
 Maternal history- no specific
 Paternal history- no specific
 Self history – no specific

General examinations-

G/C- good
 Temperature – 98 F
 Pulse-80/ min
 BP – 130/80 mm of hg
 Eyes- no icterus
 Skin-no pallor
 Tongue- no cyanosis
 No coating

Systemic examination-
 R S – AE=BE
 Clear
 CVS – S1 S2 normal
 No added sounds
 CNS – oriented
 P/A – soft
 L/E – discoloration over skin of left leg
 Hair loss,Decreased local temperature

Peripheral pulsation

Peripheral arteries	Left lower limb	Right lower limb
Dorsalis pedis	-	-
Posterior tibial	-	+
popliteal	-	+
femoral	+	+

Non healing ulcer over left greater and second toe-slough +, Unhealthy granulation,Callosity of edges.

Investigations-

Hb – 13 gm%
 WBC – 4,300
 RBC – 4,000 millions/mm³
 Bleeding time- 1min 5 sec
 Clotting time – 5min 0 sec
 Blood sugar level F- 95 mg/dl
 PP- 110 mg/dl
 Urine routine- NAD
 Microscopic – NAD
 HbsAg – non reactive
 HIV– non reactive
 USG abdo pelvis – Within normal limits

Arterial Doppler left lower limb - thrombosis of SFA, popliteal and post tibial seen. No flow was seen in dorsalis pedis.

Diagnosis – TAO of left lower limb.

Ayurvedic concept

TAO is thrombus in the arteries with inflammation. This can be related to *strotodushti* so the *lakshanas*, *sanga* and *siranam granthi* involving the *raktavah strotas* should be relieved. *Leech* therapy is the best treatment for local vitiation of blood. Main principle behind the treatment is removal of the thrombus, subsiding the inflammatory changes and improving the collateral circulation.

Management-

1. *Leech therapy*
 3 sets were made of 4 leeches.

Under all aseptic precautions each set was applied alternately after 3 days
 Leech once used was then made into use after 7 days.
 This regime was continued for 1 month
 The Hb of the patient was monitored
 After one month the frequency of leech application was reduced to once per week for 1 month.

2. *Guduchi swaras*

Daily freshly prepared *guduchi swaras* was given
 Dose- 30 ml twice daily

3. *Til taila dhara*

The days when leech therapy was not done that time lukewarm *til taila* was used for *dhara sweda* to bilateral whole lower limb for 15 minutes
 This was done for one month

4. **Exercise-** Buerger's exercise was explained and it was strictly performed by the patient 4 to 5 times a day and 10 minutes each.

5. Daily dressing

The chronic ulcer was daily dressed with *vranshodhan taila* in initial stages

Once the healing process started the dressing was done with *jatyadi taila*.

RESULTS

Pain- subsided in 1st week

Claudication distance- was improved –from 50m to 100m in 15 days

And 200m in 1 month

Rest pain- rest pain totally disappeared in 1 month

Discoloration- skin colour started to improve from 15 days and returned to normal in 1 month

Local temperature- the local temperature started to raise after 3rd set application

Hair growth- hair growth was seen over the limb

Ulcer – the size of the ulcer has reduced in 15 days

After 1 month the ulcer was completely healed

DISCUSSION

Leeches – Hirudina medicinalis species were used. *Leeches* have many chemical constituents among which hirudin is the important one. It helps in reducing the size of the thrombus. It is also having anti-inflammatory activity and thus helps in the pain management. Secondly it improves the microcirculation which in helps to maintain the collateral circulation. This helps in increase of the local temperature and hair growth over the limb.

Improved collateral chain improved the discolouration of the involved limb, the ischaemic changes didn't progress further. Though there was no obvious visible distal pulsation present but the sign and symptoms of ischaemia subsided due to increased micro circulation. This helped for improving intermittent claudication and thus the claudication distance has improved, rest pain was relieved due to improvement in the ischemia of the nerves.

Guduchi.^[7]

Latin –*tinospora cordifolia*

Ras- madhur, tikta

Virya- ushna

Vipak- madhur

Guna – *shleshma shonit vibandha prashmananam, rasayni.*

According to *Ayurveda guduchi* is *shonitavibandha nashini*.^[8] This *guna* helps in the removal of vitiation of blood.

Til taila (sesamum indicum)

Twak prasadan, mardavkrit, vataghna, mamsa sthairya are the properties of *til taila*. *Til taila* is said to be best

for *abhyanga*.^[9] So it helps in maintaining the life of the skin tissues also maintains the elasticity of the tissues.

CONCLUSION

Ayurvedic management for TAO is result oriented, also is cost effective and it

Minimises the chances of surgical interventional procedures.

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