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MANAGING CHRONIC ARTERIAL OCCLUSION WITH AYURVEDIC TREATMENT: A CASE STUDY

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ABSTRACT:

Chronic arterial occlusion is a common arterial disorder, caused by atherosclerosis, trauma, emboli. Among them atherosclerosis is most common cause of chronic arterial occlusion of lower extremities. Arterial narrowing or obstruction occurs as result of atherosclerosis, reduces blood flow to lower limb during exercise or rest. It is manifested by intermittent claudication, rest pain and later the condition leads to arterial ulcer or gangrene formation in lower limb. Thus the disease causes either disability or deformity and is becoming the most common cause for amputation in lower extremities. Epidemiological studies suggest 5% of men & 2.5% of women at 60 years of age or above have intermittent claudication. The prevalence is again three fold higher when diagnosis of arterial insuffiency is made in asymptomatic and symptomatic individuals. Moreover there is no satisfactory answer from other systems of medicine. Therefore trial was conducted considering the vataprokopa Lakshanas in lower limb with certain Panchkarma procedures & leech therapy, which has shown encouraging results.

KEY WORDS: *Atherosclerosis, Chronic arterial occlusion, intermittent claudication, Rest pain, Leech therapy, Panchkarma procedures,*

INTRODUCTION

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Arterial occlusion is most common arterial disorder, caused by atherosclerosis, trauma, & emboli. It is of two types , acute & chronic. Among them chronic arterial occlusion characteristically affects larger systemic arteries. In various places symptoms produced by arterial occlusion

are different, e. g. in lower limb it causes intermittent claudication, rest pain, gangrene. In heart it causes angina & myocardial infarction, in brain it causes transient ischemic attack, in kidney it causes systemic hypertension. Thus occurrence of the symptoms depends on the site of occlusion of artery. The most common site of occlusion is bifurcation of abdominal aorta and thereafter. So symptoms arise at lower limbs is manifested by intermittent claudication, rest pain and later the condition leads to arterial ulcer or gangrene formation. Epidemiological studies suggests 5% of men & 2.5% of women at 60 years of age or above have intermittent claudication. The prevalence is again three fold higher when diagnosis of arterial insuffiency is made in asymptomatic and symptomatic individuals[1]. It causes disability to do the work and even deformity after the formation of gangrene, for which patient even have to undergo for amputation either for limb saving or for life saving[2].

Though there are different opinion regarding *Dhamani structure* in Ayurveda, very often it is attributed to artery due to its pulsatile nature[3]. So we can associate arterial disorders with *Dhamni Vikara.* Though we won't get detailed explanation for *Dhamni Vikara*, but *Dhamnipratichaya* in *Sleshma nanatmaj vikara*[4] is commented as *Dhamani Upalepa* which can be attributed as atherosclerosis. It leads to *Margavrodhjanya vataprokopa.* And thus patient gets pain on exercise, numbness, paraesthesia, cold on touch. Even similar symptoms, *Dhamanisankoch* also can be found out in *Vatadhic gambhir vatarakta*[5], but aetiopathological factors and other all symptoms do not supports chronic arterial insuffiency.

Chronic Arterial Occlusion is common in few conditions like hypercholesterolemia, Diabetes mellitus, & smoking. Clinical manifestation of the disease is,

1. Intermittent claudication- "Claudio" means ''I'' limp. Pain is experienced during exertion. The group of muscles which will be affected by this pain, depends on site of arterial occlusion. For e.g. In aorto-iliac obstruction , claudication is felt in both buttocks, thighs & calves. In case of iliac obstruction, claudication is felt at thighs & calf of same side. Pain increases on exercise and relieves by rest.
2. Rest pain- Pain at most distal of arterial supply e.g. foot, toes. Pain worsens at night, and on elevation of legs.
3. Pregangrenous changes like, cold, numbness, paraesthesia.

4. Arterial ulcers- They may be painful, superficial erosion between toes or, small shallow indolent non healing ulcers on dorsum of foot.
5. Gangrene- furthermore condition deteriorates after trivial injury , and tissue necrosis starts leading to gangrene formation.
6. On examination there may be change in color of extremities, reduced peripheral pulsation, increased venous refilling time ,signs of ischemia like loss of subcutaneous fat, thinning of skin, brittle nails etc.

Available treatment is,

1. Supervised exercise especially walking within limit of disability
2. Advice for diet to correct weight, high blood lipid
3. Care for ischemic limb. Avoid amateur chiropody
4. Drugs- Anti diabetic, antihyperlipidemic, anti platelet etc. Vasodilators are having limited success .
5. Surgery- Transluminal Angioplasty, stenting, reconstructive surgeries like bypass graft etc[6].

CASE REPORT

A person aged 60 years , medium built, company executive visited OPD of SJSAC&H with following complaints.

Chief Complaints: Pain in both legs from buttock to toes on walking along with numbness & burning sensation since 6 months. He was not able to walk continuously for more than 5 min. Pain was reducing after taking rest. Symptoms were more severe on left leg. Patient is k/c of Diabetes mellitus & hypertension since 15 years & is on regular medication with controlled biochemical values and blood pressure. In Personal history**,** Patient informed that he was chain smoker approximately 4-5 cigarette packs / day since 35 years. On Examination There was reduced temperature in both lower limb. Reduced peripheral pulsation at femoral, popliteal, & paedis dorsalis arteries were found. Burger's angle i.e. able to raise leg from bed was 50°. Patient was unable to walk more than 10 meter continuously.

Investigations**:** Color Doppler study of both lower limb were suggestive of significant narrowing in infra renal abdominal aorta & reduced blood supply to both lower limb. So on above clinical examination, patient was diagnosed as chronic arterial occlusion.

TREATMENT PLAN

Though Chronic arterial occlusion is associated with atherosclerosis or diabetes mellitus , it is having its own symptom complex. It should be treated as separate entity. Based on above said symptom , it was found that patient was having *Pratichaya in Dhamani* which was casing reduced flow to lower limb i.e. *Margavrodhjanya Vataprokopa lakshnas (Ruja, stabthata), Vyadi adishthana* was *Adho Kayaashrita dhamani* So *Virechana*[7] and *Jaloukavcharan* (leech therapy) was planned. Though patient was known diabetic, on observing *Vataprokopa Lakshanas* , after shodhana *Abhyanga and Swedana* was done.

- Classical *Virechana*
- *Abhyanga and Patra Pottali Swedam (PPS)*
- *Jaloukavacharana*

VIRECHANA

For *Virechana, Aarohanakrama Snehapana* was administered. As the patient was known diabetic, *Dhanvantaram Ghritam* was preferred for *Abhyantara Snehapana*[7].After test dose we found that patient was able to digest 30 ml in 3 hour . After reviewing *Agnibala* of patient, *Snehapana* was given starting from 30ml to 120 ml. and was stopped after 4 days as he got *samyak Snigdha lakshanas*.though Though Swedana is contraindicated in *Madhumeha,* Sushruta himself advised it before *Rasayana vidhi*.[8] After *Abhyanga a*nd *Sweda* for two days *Virechana* was given with *Abhayadi Modaka* 2 tablets. Patient had *samyak Virechana. Samsarjanakrama* was followed till patient regained his *Agnibala* , for next 2 days

Abhyanga and Patra Pottali Swedam (PPS) : for 14 days, *Ksheerabala tailam* and *Sahacharadi tailam* were taken as *Sneha dravyas* for *Abhyanga and PPS.* As the patient is associated with *Madhumeha,* duration and intensity of heat impart was maintained lower than normal *PPS.*

***JALOUKAVCHARANA*:**

Meanwhile *Jaloukavcharana* was done intermittently 4 times at Inguinal region bilaterally

Procedure:

***Poorvakarma* :** Preparation of patient's part - cleaning with *Triphala kashaya*

Preparation of *Jalouka*- Keeping the *jaloukas* in Turmeric water for 5 min

***Pradhana karma*:**, 3 *jaloukas* were applied on inguinal region bilaterally. When they started sucking blood by making anterior sucker hood shaped, their body was covered with wet cloth and intermittently water was poured on cloth to keep it wet. Approximately each *Jalouka* sucked for 30-45 minutes.

Paschat karma: Once leeches left the site, blood was allowed to let for some time and then dressed with application of *Haridra churna*, tightly bandaged. *Haridra churna* was smeared at leech mouth to vomit the blood. Once they have vomited the blood, they are kept in turmeric water for some time . Approximately each *jalouka* vomited 5-7 ml of blood

Same procedure was repeated for other sites and for 4 sittings. Each time 3-3 *jaloukas* used on both inguinal region every 5 days interval.

OBSERVATION & RESULT

At the end of treatment after 25 days, patient was relieved from pain . Patient was assessed again clinically on following parameters.

Symptom/Sign	Before treatment	After treatment
1. Claudication distance	10 meter	1 Km
2. Burger's angle	50°	70°
3. Pulsation at dorsalis paedis artery	Reduced volume Barely palpable	Improved volume Easily palpable

Now patient was able to walk up to 1 km continuously without taking rest (claudication distance) at evening walk. He was able to raise his leg without pain up to 70° (Burger's angle).

DISCUSSION

In Ayurveda, Dhamani *pratichaya* has been described under *Kapha nanatmaja vyadhi*. Due to *Pratichaya* or *Upalepa*, arterial occlusion is occurring, which is causing pain in lower extremities and *rasa rakta kshaya* in distal part of the body which was causing signs of ischemia in lower limb. Though this condition is occurring along with or due to diabetes mellitus, symptoms are not similar to complication of Diabetes mellitus. Here symptoms do not resemble to *Prameha Upadrava*[9] also. In spite of regular medication for Diabetes mellitus, and controlled blood sugar levels, patient was suffering from chronic arterial occlusion. So it is considered as a separate disease and based on *Samprapti Ghatakas*, patient was planned for *vatahara chikitsa.* the patient was K/C of DM *Dhanvantaram ghritam* was given as explained by Susruta. As there was *Atisang dushti* in *Rakta vaha srotas (dhamani)* due to *asryasrayi bhava* *Virechana & Raktamokshana* was planned. Vagbhata has clearly indicated *Jaloukavcharan* in

sukumara and for *grathita Rakta* (clotted blood)[10], considering patient's built and age Jaloukavcharan was selected for *Raktamokshana* . As the patient was having occlusion of arteries from infra renal aorta *jaloukas* were applied on inguinal region bilaterally. Leech saliva contains several bioactive substances including vasodilators, anesthetics and Hirudin - a potent anticoagulant, which prevents blood from clotting[11]. As thrombosis is a major risk in arterial occlusion, can cause complications like arterial ulcer or gangrene. So leech therapy is giving dual effect improving blood supply & preventing the risk of thrombosis formation.

Conclusion: In this single case study of chronic arterial occlusion *Panchakarma* and *Jaloukavcharan* has shown encouraging results. *Abhyanga* and *PPS* are known for their *Vatahara* properties. Virechana was administered for *Srotoshodhana* as it is *Margavarodhajanya Vyadhi*. *Jaloukavcharan* was done to improve blood supply and to prevent further complications like thrombosis. In 25 days of treatment regime, patient was relieved from pain, his claudication distance and Burgers angle got increased along with improved peripheral arterial pulsations. As other treatment modalities are not providing success and only surgical option is advised to patient Ayurvedic management is giving noninvasive & satisfactory result. As it was single case study, furthermore advanced studies in the field may enhance knowledge regarding some basic concepts of arterial occlusion in Ayurveda. Moreover, it may yield a better choice of management.

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