



AYURVEDIC MANAGEMENT OF BUERGER'S DISEASE

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ABSTRACT

Buerger's disease is a condition characterized by occlusive disease of small and medium sized arteries (planter, etc.). The first reported case of BUERGER'S DISEASE was described in Germany by Von Winiwarer in 1879. This disease involves small to medium sized arteries and veins of the upper and lower extremities. This disease is found more frequently in men between 20 – 40 years of age. It is very uncommon in women (male: female 3:1) who constitute only 5% -10% of all patients with buerger's disease. This condition is strongly associated with smoking. In Ayurveda there is no clear cut evidence of buerger's disease, but on the basis of its clinical presentation and pathogenesis, it can be correlated with vatarakta. Vatarakta is such a disease where simultaneously vata and rakta both are vitiated and vitiated vata obstructed the rakta vaha srota. Once localized, it get associated with pitta causes respective affliction. Hence it produce pain mostly in respective joint and which is very difficult to tolerate. Symptoms which are found having predominance of vata, rakta, pitta, and kapha or in combination of two or three dosha. There is no such description available in ayurvedic text as BUERGER'S DISEASE but on the basis of pathogenesis, sign and symptoms this disease can be correlated with vata rakta vyadhi. Here vata and rakta plays a vital role for the production of the disease, keeping this view in mind we have started the following therapy and had got response. This is hypothesis that co relation buerger's disease with gambhir vata rakta and treat accordingly which was describe in our classics.

Key words: Buerger disease, vatarakta, dosha

INTRODUCTION

Buerger's disease is a condition characterized by occlusive disease of small and medium sized arteries (planter, etc.). The first reported case of buerger's disease was described in Germany by Von Winiwarer in 1879. But it is Leo Burger who published it in details in 1908 & again in 1924. This disease is found more frequently in men between 20 – 40 years of age. It is very uncommon in women (male: female 3:1) who constitute only 5% -10% of all patients with buerger's disease. The prevalence of the disease in the United States was 104 cases per 1, 00,000 populations. Buerger's disease is relatively less common in people of northern European descent. Natives of India, Korea, Japan have highest incident of the disease. Buerger's disease is the inflammation reaction in the arterial wall with involvement of the neighboring vein and nerve and terminating in thrombosis of artery. This disease involves small to medium sized arteries and veins of the upper and lower extremities. The condition is strongly associated with smoking. Usually 20 or more cigarettes per day is required for this disease to occur. The cardinal symptoms of the disease are rest pain, unremitting ischemic ulceration and gangrene of the digits of hand and feet.

ETIO PATHOGENESIS OF DISEASE

Etiology of buerger's disease is unknown addiction of tobacco is essential for both initiation and progression of the disease. The diseased artery is usually surrounded by a dense fibrotic reaction which incorporates the adjacent vein. Diffuse inflammatory reaction involving all three coats of vessels (pan arteries) causing a thrombus, resulting in occlusion of lumen (obliterans). Polymorphs, giant cells & micro abscess are found within the thrombus. The diseased artery is usually surrounded by a dense fibrotic reaction which incorporates the adjacent veins & less often the neighboring nerve. Both upper and lower extremities are affected in contrast to arteriosclerosis which usually spares the upper extremities. In lower extremities the disease generally occur beyond the popliteal arteries, starting in tibial arteries extended to the vessels of foot.

CLASSIC SIGNS AND SYMPTOMS

Sign and symptoms-

Pain : Due to peripheral involvement, pedal arteries are affected earlier & patients complaints of pain in the distal extremities during walking at the arch of the foot, less pain occurs at the calf of the leg but never at the thigh or buttock, intensity of pain increases during exercise and pain also persist during rest, typically it begins in the extremities but may radiate to other body parts. In the upper extremity it occurs in the vessels distal to the wrist.

Numbness and tingling sensation in the extremity

Skin colour changes and ulceration and gangrene of one or more digits

DIAGNOSIS

Clinical diagnosis can be made by –

History taking:

- 1) cigarette smoking
- 2) Younger age group 20 -40 yrs
- 3) Male (male: female = 3:1)
- 4) Low socio economic status.
- 5) Usually symptoms first occur in the lower limbs unilateral or bilateral but upper limb involvement is not uncommon. .

Physical examination-

There may not be any specific finding till gangrene develops. Before the development of gangrene one may find the sign of chronic tissue ischaemia.

Palpation – The most frequent finding is absence of posterior tibial & dorsalispedis pulses in the feet. Absence of the post. tibial pulses is highly suggestive of the diagnosis especially when bilateral. In upper extremity the radial pulse may be absent and when bilateral it is also suggestive of this disease. Arteriography and color Doppler of the extremities are helpful in diagnosis of buerger's disease.

In Ayurveda there is no clear cut evidence of buerger's disease, but on the basis of its clinical presentation and pathogenesis, it can be correlated with vatarakta. Vatarakta is such a disease where simultaneously vata and rakta both are vitiated and vitiated vata obstructed the rakta vaha srota. Symptoms are manifested on the involvement of the

neighboring vessels, arterial wall and according to the site of obstruction. The sites of its manifestation are hands, feet, fingers, toes then spreads in the entire body. But it begins to start in the distal phalanges in hand and feet and therefore it spreads to all joints. Due to subtleness and pervasiveness of *vayu* & liquidity, flowingness of blood the toxic element spread by means of circulatory system in the whole body, gets obstructed in joints and being agitated, it gets localized in the joints due to tortuous nature of its course in the joints. Once localized, it gets associated with *pitta* causes respective affliction. Hence it produces pain mostly in respective joint and which is very difficult to tolerate.¹ Symptoms which are found having predominance of *vata*, *rakta*, *pitta*, and *kapha* or in combination of two or three *dosha*. *vata rakta* if associated with *rakta* then symptoms like excessive distension of the veins, tenderness, and pricking, tearing, throbbing type of pain and numbness occur.² If it is associated with *vata*, then results in blackish discoloration, roughness, contraction of arteries and fingers, joints.³ *Vata rakta* if associated with *prakopa* of *pitta* then swelling with severe pain, piercing pain, coppering with severe burning sensation, excessive heat, red inflammation and softness these symptoms appear.⁴ It associated with *kapha* then feet become cold, itching, edematous, flabby and stiff.⁵ Overall important symptoms of the disease like blackish discoloration of the parts followed by excruciating pain and numbness. Provoked *dosha* produce disease due to *srota dusti* only. When the *srotas* are functioning normal then disease does not occur. Depending upon the *dosha* *dushya sammurchana* and its site of manifestation, *vatarakta* mainly of two types. *Uttan* and *gambhir*, in the beginning it is superficial like *kustha* and after a period of time it becomes deep. In *uttan vatarakta* the site of manifestation is skin and muscles, but the later it involves the deeper tissue and joints. In *uttan vatarakta* the sign and symptoms like itching, burning sensation, different type of aches and pain during flexion and extension.⁶ The skin of the affected parts become blackish, red or coppery in colour. Probably the symptoms occur due to insufficient blood supply to the affected parts. In *gambhir vata rakta* the sign and symptoms like edema of the affected parts as well as excruciating pain, blackish discoloration and lastly suppuration of the affected parts.⁷

SAMPRAPTI GHATAKAS – For the study of manifestation of *vata rakta* in the light of ayurvedic concepts of *dosha*, *dushya* and *srotas*, involvement of the following factors play important role in *samprapti* of *vata rakta*.

Dosha – a) *vata* – *vyan* *vayu*, b) *pitta* – *bhrajak*, *pachak* *pitta*. c) *rakta*.

Dushya – *rakta dhatu*, *twak*, *mamsa*

Agni – *jatharagni*, *raktagni*, *bhutagni*.

Srotas – *raktavaha srota*.

Srota dusti – *sanga*.

Adhistan – *twak*, *mamsa*, *sandhi*,

Roga marga – *madhyam roga marga*.

SADHYASADHYATA.- The prognosis of the disease is both *sadhya* and *yappya*. The cause behind the disease should be detected first then regime of *aushadha* (medicine), *ahar* (diet), *vihar* (activities) should be planned. According to textual concept the condition is curable which is recent origin resulting from provocation of single *dosha*, but it is palliable if two *dosha* are involved, if combined with three *dosha* then it is incurable.⁸

MANAGEMENT OF BUERGER'S DISEASE THROUGH AYURVEDIC WAY

There is no such description available in ayurvedic text as *buerger's disease* but on the basis of pathogenesis, sign and symptoms this disease can be correlated with *vata rakta vyadhi*. Here *vata* and *rakta* plays a vital role for the production of the disease, keeping this view in mind we have started the following therapy and had got response. This is hypothesis that co relation *buerger's disease* with *gambhir vata rakta* and treat accordingly which was describe in our classics.

Treatment principle of *uttan vatarakta* are *Alepa* (application of medicinal ointment), *Abhyanga* (massage), *Pariseka* and *Upanaha*. But in *gambhir vata rakta* medicated enema (*anubasan basti*), purgation therapy is given⁹.

In *gambhir vata rakta* the aggravated *vata* located in the periphery causes obstruction to the channels instantaneously followed by muscle tissues destruction and pain.

As per text leech therapy can be use in this case.¹⁰

A CASE HISTORY

Abuerger's disease ul barik 67 yrs old muslim male, a farmer by occupation of *Murshidabad* district in west bengal was diagnosed with *buerger's disease* in a state allopathic general hospital. Arterial doppler study of the right lower leg revealed diffuse atherosclerotic changes in right lower limb arterial tree with almost complete block of mid and distal superficial femoral artery, anterior tibial artery, *dorsalis pedis* artery and peroneal artery as well as diffuse stenosis of posterior tibial artery along with absence of bruit on auscultation. (dated; 20\12\2008 from medical centre) was advised for complete amputation. The patient denied and got admitted in *j.b.roy* state ayurvedic medical college and hospital, *kolkata* with a ray of hope in ayurveda. He was presented with complaint of pain, swelling and burning sensation which occurred at affected sight. He was unable to walk and completely dependent on others for his routine work. He was also having complaint of disturb sleep at night due pain which occurred at affected part. This case was studied under my supervision.

His treatment schedule for 15 days comprised of –

- 1) Freshly prepared *Dasamula* kwath avagahan on affected parts/day
- 2) Leech therapy on alternate days for 2 wks.
- 3) *Prakshalan* with *Pancha valka* *kasayam* on the affected area after leech therapy,
- 4) *Jatyadi tailam* applied locally on the affected area after leech therapy.
- 5) *Koisore guggulu* 500 mg + *Arogyavardhini vatika* 500 mg twice a day after breakfast and dinner with *anupana* of freshly prepared 30 ml *Mahamanjishthadi* kwath.
- 6) *Gandharvahastadi erandatailam* 10 ml at bed time.

During the 15 day treatment schedule the digit which had *buerger's disease* did fall automatically and a big wound was developed; we continued the treatment schedule for another 15 days.

TREATMENT SCHEDULE AFTER THE STIPULATED PERIOD COMPRISED OF -

- 1) *Dashmula* kwath avagahan in affected parts
- 2) leech therapy thrice in a week.
- 3) *Prakshalan* with *Pancha balka* *kasayam*,
- 4) *Jatyadi tailam* applied locally
- 5) *Cap guduchi* 2 cap each twice a day after breakfast,
- 6) *Koisore guggulu* 1 gm with *Mahamanjishthadi* kwath 30 ml twice a day.
- 7) *Gandharvahastadi erandatailam* 10 ml at bed time

PATHYAPATHYA

Patient was advised to take puran yava, godhum, shali and shashti rice along with pulses of arhara, chana, mudaga, masura and mankushtha. He was also advised to take milk and goghrita.¹¹

Apathya

He was advised not to take lavana, amla, katu, ushna ahara, kultha, masha (udada), haritaka shaka (salad), guda, cold water, curd, takra non veg, incompatible diet and fast food and alcohol.¹²

He was also advised not to have diet in ajirna condition. Tobacco chewing, smoking.

Vihara

Avoid day time sleep¹³

Yoga

Buerger exercise, Padanguli naman and gulfa naman, Ankle rotation, Padotthanaasana

Relaxing asana

Shavasana

Pranayama

Nadi shodhana, Anuloma viloma, Bhramari pranayama

OBSERVATION AND RESULT

Patient relieved symptomatically better and wound reduce in size granulation tissue develop going to heal. Patient get back his sensation to some extent. Pulsation of post tibial & dorsalis pedis came back. Skin colour change into normal and local skin temperature is normal. Diminution of a pulse can best be appreciated by comparing it with the pulse in the other limb, provided that the latter is normal. In arterial occlusion with a highly developed collateral circulation, or in main artery stenosis, the distal pulses may be normal to palpation. The following physical sign is useful. On 11/04/2009 right lower limb arteries duplex colour study had been made in NORTH CITY diagnostic centre, Kolkata and revealed that grade 2 atherosclerotic changes noted in large arteries of lower limbs, gradual slowing of flow is noted in femoropoplital segment. No focal stenosis identified. Right anterior and posterior tibial arteries have some ischemic flow. Femoral artery bruit on auscultation was also heard after 15 days of treatment.

DISCUSSION

As earlier said buerger disease is not described in Ayurvedic text. But on the basis of sign and symptoms it can be correlated with Vatarakta. So local and systemic treatment was given to the patient as per text (explained under Vata shonita chapter). According to Ayurvedic concept pain occur due to vitiation of vata dosha, burning sensation occur due to pitta dosha and pus occur due to kapha dosha. Dashmula kwatha and Panchavalka kashaya was used for avgahna because Dasmula Kwath has anti inflammatory activity and it pacifies Vata. Panchavalka kashaya has properties like vranaprakshalana, vranaropana and shothahara¹⁴. jatyadi tailam was applied after avgahna on the affected part for soothing, cleansing and healing effect. Phytochemical evaluation of jatyadi tailam revealed presence of flavonoids, essential oils, tannins, glycosides and alkaloids while resins were found to be absent. HPTLC confirmed the presence of karanjin, lupeol jatyadi tailam. Jatyadi tailam was found to be non-irritant¹⁵

For systemic treatment kaishor guggulu, capsule guduchi and gandharvahasti eranda tailam was used because kaishor guggulu it improves the agni, drug of choice of vatashonita and having shavthuhar property.¹⁶ Gandharvahastadi taila is

very good drug which pacify vata and thereby improving circulation. So in avrita vata it can be used.

LEECH THERAPY

Anti-inflammatory Effects of Leeches: Buerger's disease ellins is a compound in the leech's saliva that acts as an anti-inflammatory agent by inhibiting trypsin as well as plasmin. It also inhibits the action of the acrosin. Another anti-inflammatory agent is the eglins.

Vasodilating Effects of Leeches There are three compounds in the leeches' saliva that act as a vasodilator agent, and they are the histamine-like substances, the acetylcholine, and the carboxypeptidase A inhibitors. All these act to widen the vessels, thus, causing inflow of blood to the site.

Bacteriostatic and Anesthetic Effects of Leeches The saliva of leeches also contains anesthetic substances which deaden pain on the site and also bacteria-inhibiting substances which inhibit the growth of bacteria.

This is a single case study, but this treatment schedule may be useful for the management of buerger's disease. There is the need of further study.



Photograph 1 showing the condition of affected part before the treatment



Photograph 2 showing the condition of affected part during treatment



Photograph 3 showing the condition of affected part after treatment

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