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Ayurvedic Understanding of Thromboangitis Obliterans (Buerger's Disease)

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ABSTRACT

Thromboangitis Obliterans is an inflammatory occlusive vascular disorder involving small and medium sized arteries and veins in the distal upper and lower extremities. The disorder develops most commonly in men less than 40 years of age. Although the cause is unknown, there is a definite relationship to cigarette smoking in patients with this disorder. The clinical feature of TAO often include a triad of claudication of the affected extremity, Raynaud's phenomenon, and migratory superficial vein thrombophlebitis. In ayurveda, TAO can be understood as *Gambhareera Vatarakta* manifested as a result of *Avarana* by *Pitta*, *Kapha* and *Medas*. Therefore, the main line of management of TAO in Ayurveda include *Avarana chikitsa*, *Raktamokshana*, *Kevela Vata chikitsa* and *Rasayana*.

KEYWORDS

Thromboangitis, Obliterans, Buerger's Disease, Gambhareera Vatarakta



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INTRODUCTION

Non atherosclerotic segmental inflammatory disease affects small and medium sized arteries and veins of the upper and lower extremities. First described in 1879 by Felix Von Winiwarter, an Austrian Surgeon. Buerger was the one who described the cellular nature of thrombosis and named this condition as Thrombo Angitis Obliterans. Prevalence of this disease in all patients of peripheral vascular disease ranges from 45% to 63% in India. It mostly affect men than women. Proportion of female TAO patients vary from 11% to 23%¹.

CAUSES

It is frequently associated with chronic smoking. Smoking helps in initiation and progression of the disease. May be due to an abnormal sensitivity to some component in tobacco. This abnormal sensitivity results in inflammation of the blood vessels. Genetics –Associated with high prevalence of HLA-B5 HLA-A54 and HLA –A9. Immunologic mechanisms – Associated with presence of antinuclear, antielastin anti collagen 1 and 3, anti nicotine antibody.

PATHOLOGY

Three phase –Acute, Intermediate and Chronic. Acute phase – Inflammation in association with occlusive thrombus

formation. Intermediate phase – Progressive organization of occlusive thrombus. Chronic Phase – prominent vascularization of the media and adventitial and perivascular fibrosis. In all the three phases, the architecture of the vessel wall remains intact.

CLINICAL FEATURES

Manifested as migratory superficial thrombophlebitis or arterial insufficiency in the extremities. Pain – intermittent claudication in early stages or rest pain in later stages. Shooting pain as a result of nerve involvement, mild oedema, reduced distal pulsation, paraesthesia–tingling/numbness/burning sensation, slight reduction in temperature, ulcer /gangrene in the digits

GRADING OF TAO

Rutherford classification

Grade 1 – Asymptomatic

Grade 2- Claudication

Grade 3- Rest pain

Grade 4- ulcer formation not exceeding digits

Grade 5 – Severe ulcers and gangrene formation

CLINICAL EXAMINATION

Inspection: Flattening of terminal pulp of toes, nails become brittle, flattened and ridged, skin becomes shiny, cracks, ulceration, gangrene with clear line of demarcation) and limb atrophy of muscles.



Palpation: Palpation of peripheral pulses, tenderness, pitting edema, ulcer and gangrene etc

PHYSICAL TESTS

Buerger's Postural test

Raising the leg by more than 30 degree for 30 -60 seconds results in pallor of the toes due to arterial insufficiency.

Management:

Stop smoking

Administration of Vaso dialators – Pentoxifyline, Cilostazol

Surgical revascularization, Sympathectomy

AYURVEDIC PERSPECTIVE:

Nidanas

The possible *Nidanas* for the manifestation of TAO according to Ayurveda fall under the following four spectrum.

Santarpanotha nidanas – Excessive intake of *Snigdha, Madhura, Guru, Picchila gunayukta aahara, Chesta dveshi, Diwaswapna* etc².

Raktha dushtikara nidanas – Excessive intake of *Anupa, Prasaha Mamsa, Drava, Snigdha Guru ,klinna and Pooti bhojana*³.

Vata rakta nidanas –*Sukumara, Achamkramana sheela, Mishtanna sukhabhoji, Atiyoga of Lavana, Amla, Katu ,kshara* etc⁴.

Raktavaha Sroto Dushti Nidanas – *Vidahi Ushna Drava Gunya Yukta Anna Pana*⁵.

LAKSHANAS OF GAMBHIRA VATA RAKTA - DOSHA AND DHATU WISE ANALYSIS WITH STAGES OF TAO

Acute phase of TAO – *Aavarana* to the *Rakta vaha srotas* in *Hasta* and *Paada* by *Prakupita Kapha* and *Medas*.

Basic pathology of TAO can be studied under the concept of *Pitta Kapha* and *Medaavruta janya Gambheera vatarakta*.

ACUTE PHASE: (*Rakta and Medo gata*)⁶.

Oedema- *Svyathu* - *Vataadhika Vatarakta+ Raktaadhika Vatarakta*

Intermittant claudication – *Toda/Shoola/Manda ruk* resulting in *Khanja– Vaatadhika Vatarakta +Kaphadhika Vatarakta*

Reduced distal pulsation – *Siraayama – Sira vistharanam – Vatadhika Vatarakta*

Parasthesia

Tingling- *Sphuranam* – *Vatadhika Vatarakta*

Numbness- *Supti- Kaphadhika Vatarakta*

Burning sensation – *Daha – Pittadhika Vatarakta*

Slight reduction in temperature – *Sthaimityam – Kaphadhika Vatarakta*

INTERMEDIATE PHASE: (*Rakta Medas Asthi Majja*)⁷.

Symptoms of Acute Phase

+



Rest pain – *Ruk Vidahanvito abheekshnam/ Antar brushartiman/ Bhrusha ruk – Raktadhika Vataraktam*

Asthimajja gata vata lakshanam – Santata ruk

CHRONIC PHASE (*Raktha Mamsa Medas Asthi Majja*)⁸.

Symptoms of Acute and Intermediate phase

In early phase there is eruption of vesicles followed by ulcer formation exceeding digits – *Sphota* and *Paka*

In late phase there is gangrene formation – *Mamsa kotha* as *Vatarakta Upadrava*. The pathogenesis of TAO is shown in a flow chart in figure no 1 below

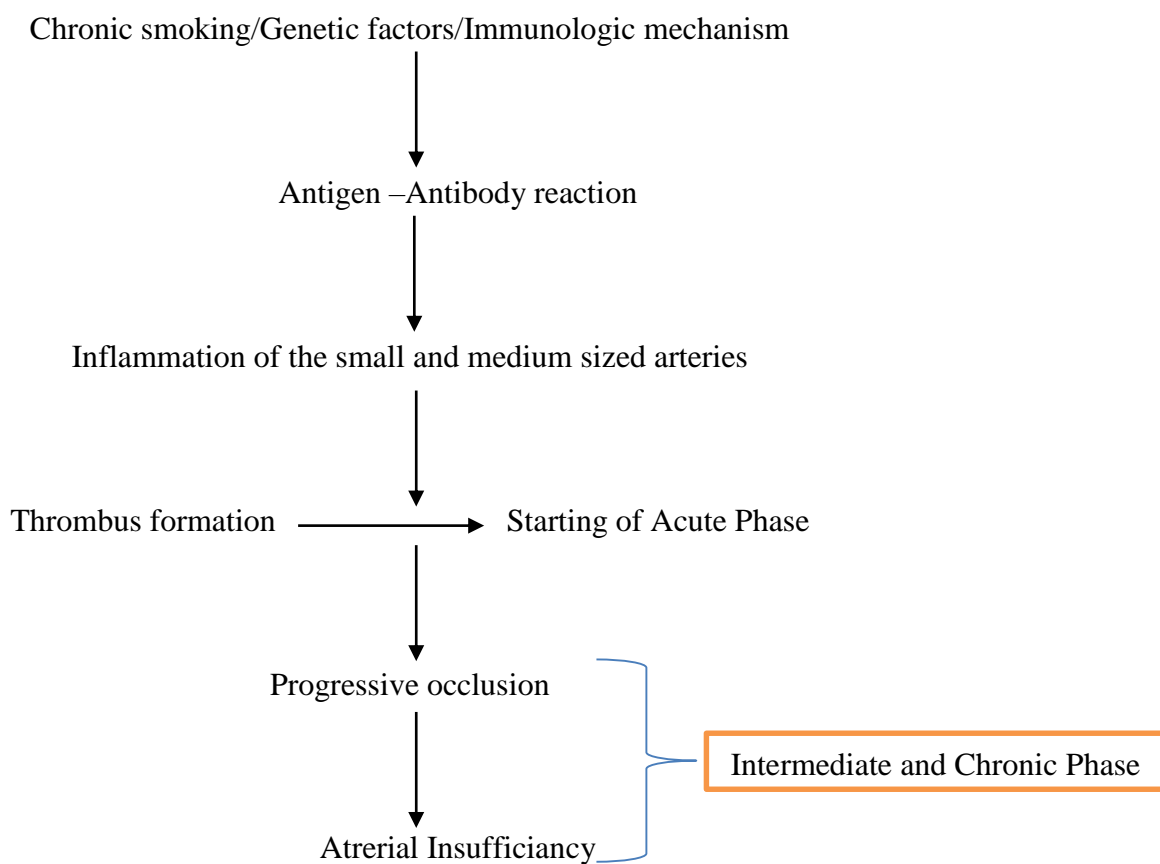


Fig 1 Pathogenesis of TAO

PROBABLE SAMPRAPTI OF TAO IN AYURVEDA [Figure No 2]

The probable *samprapti* aof TAO in Ayurveda is explained in Figure No 2 below

Vatarakta Nidanas – Achamkramana sheela, excessive intake of *Katu Lavana Kshara*

Raktavaha srotodushti nidana – Vidahi paana (Smoking)

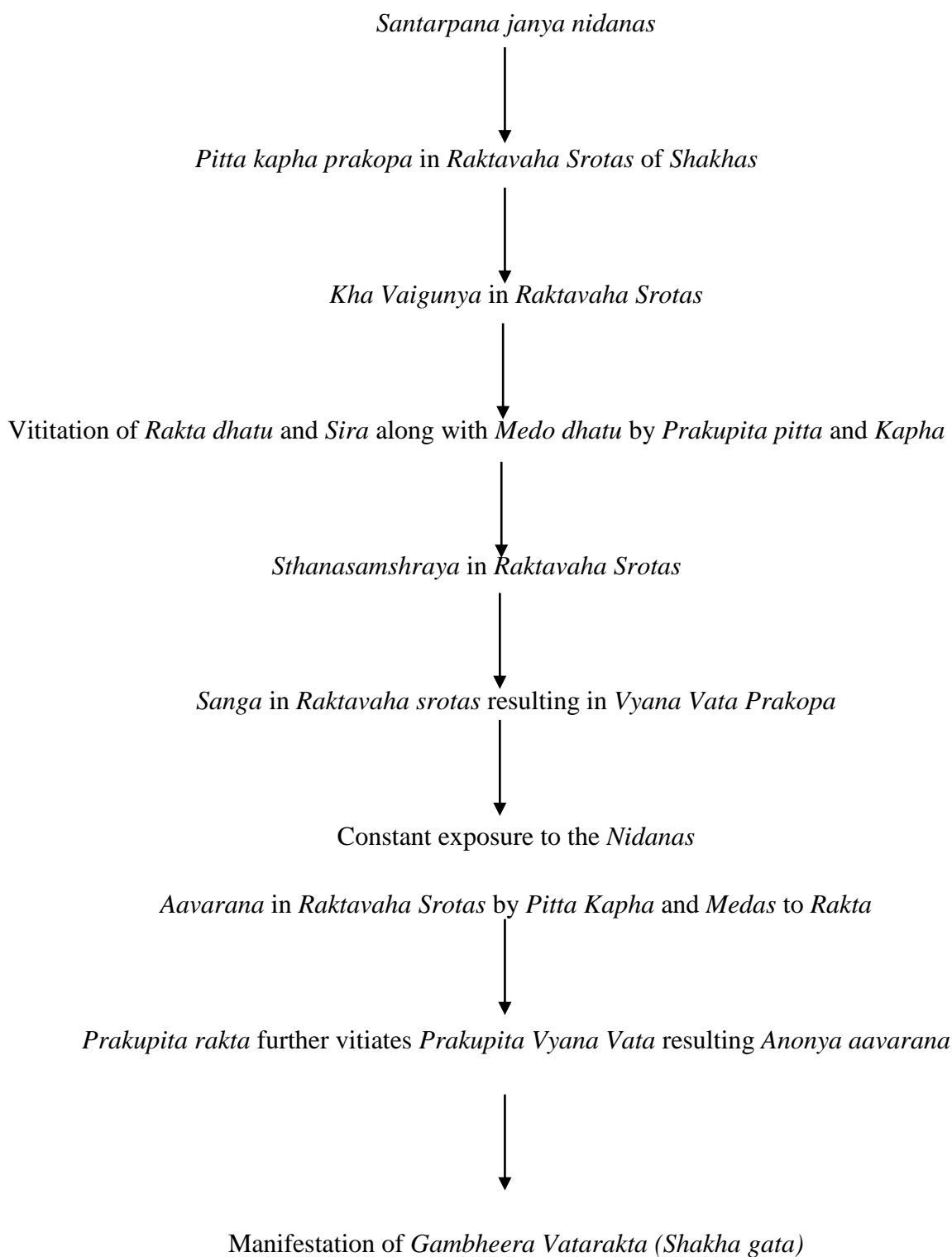


Fig 2 Probable *Samprapti* of TAO in *Ayurveda*

SAMPRAPTI GHATAKAS:

Dosha

-

Tridosha

Dushya- Dhatu - Rakta, Mamsa,

Medas, Asthi, Majja

Upadhatu -

Sira



<i>Srotas</i>	-	<i>Raktavha</i>
<i>Sroto dushti</i>	-	<i>Sanga</i>
<i>Roga marga</i>	-	<i>Bhaya</i>
<i>Udbhavasthana</i>		<i>Pakwashaya</i>
<i>Sanchara sthana</i>	-	<i>Sira</i>
<i>in shaakha (Hasta and Paada)</i>		
<i>Vyakta sthana</i>	-	<i>Skathi /Bahu</i>
<i>Roga swabhava</i>	-	<i>Chirakaari</i>

AYURVEDIC MANAGEMENT

Nidana Parivarjana – Stop smoking, avoiding the use of *Santarpano*tha nidanas, *Rakta dushti* nidanas, *Vata rakta* nidnas and *Rakta vaha* srotodushiti nidanas.

Aavarana chikitsa

Kapha Medo hara line of management – *Langhana* – *Rukshanam* – *Pachana* and *Deepana*
Rakta mokshana in the form of *Jalouka avacharana* to remove *Avarana* of *Vata* by *Rakta*.

Vatahara Chikitsa (Considering the *Bala* of *Rogi* and *Roga*)

Sneha yukta mrdu Virechanam

Ksheera basthi

Shamana Oushadhis under following spectrum:

Kapha medo hara

Pitta hara and *Rakta prasadana*

Vata anulomana

Rasayana

Other modalities of treatment includes

Lepam, Upanaham, Kashaya dhara, Takra dhara according to the avastha.

Oushadha yogas:

Kapha medo hara – *Varunadi Kashyam, Navaka guggulu, Kiashora guggulu, Kanchanara guggulu, Shiva gutika, Chandraprabha Vati, Triphala Churnam etc*

Pitta hara and Rakta Prasadana – *Mahamanjishtadi Kashayam, Manjishtadi Kashaym, Kokilaksham Kashyam, Amrutottara Kashyam, Guduchyadi Kahsyam Amrita guggulu etc*

Vata anulomana – *Sahacharadi Kashyam, Gandharvahastadi Kashayam, Avipathi Churnam, Hareetaki churnam etc*

Rasayana – *Vardhamana Pippali Rasyanam, Guru Rasayanam etc*

DISCUSSION

Thromboangitis Obliterans is an inflammatory occlusive vascular disorder involving small and medium sized arteries and veins in the distal upper and lower extremities. Cerebral, visceral and coronary vessels may be affected largely. Initial stages are characterized by the infiltration of polymorphonuclear leukocytes, and formation of an inflammatory thrombus without distorting the architecture of the blood vessel. In later stages there will be the replacement of neutrophils by fibroblasts,



mononuclear cells and giant cells and characterized by the presence of perivascular fibrosis, organized thrombus and recanalization.

In Ayurveda, TAO can be understood in the context of *Vatarakta*, specifically *Gambheera Vatarakta*. Here *Gambheera Vatarakta* manifests as a result of the *Avarana* by *Pitta*, *Kapha* and *Medas* to the *Prakupita rakta*. The *Prakupita rakta* which is occluded by the *Pitta*, *Kapha* and *Medas* will further occlude the *Vyana Vata* and thereby resulting in an *Anonya Avarana* leading to *Vatarakta* in *Gambheera Avstha*. The *Lakshanas* are manifested based on the progressive vitiation of different *Dhatus*.

The line of management of TAO in Ayurveda are to be done stage wise depending on the duration and presentation of the disease. First line of management is *Langhana* followed by *Raktamokshana*. After *Raktamokshana* in the second stage, *Snigdha Virechana* followed by *Ksheera Basthi* can be preferred. In the final stage *Kevala Vata hara Chikitsa* is adopted followed by *Rasayana*.

CONCLUSION

TAO in Ayurveda can be understood as pitta, kapha and medas avruta Gambheera Vatarakta. TAO can be managed in

Ayurveda by adopting the concept of *nidana parivarjana* and *avarana janya vatakata chikitsa*. *Naimitika Rasayanas* indicated in *Vatarakta* can be administered in TAO patients after *samyak shodhana*. The prognosis of TAO in Ayurveda depends on the duration of the disease and extent of manifestations of the signs and symptoms.



REFERENCES

1. Harrison, Harrison's principles of internal medicine, part 10, section 5, chapter 301, Arterial diseases of the extremities, 19th edition; p.1645.
2. Agnivesha, Charaka, Dridhabala, Charaka Samhita Chakrapani teeka, Sutra Sthana, Santarpaneeya adhyaya, 23/3-4, reprint edition 2017, Chaukambha Sanskrit Sansthan, Varanasi, 2017;123.
3. Agnivesha, Charaka, Dridhabala, Charaka Samhita Chakrapani teeka, sutra Sthana, Vidhishoniteeya adhyaya, 24/4-10, reprint edition 2017, Chaukambha Sanskrit Sansthan, Varanasi, 2017;125.
4. Agnivesha, Charaka, Dridhabala, Charaka Samhita Chakrapani teeka, Chikitsa Sthana, Vata shonita Adhaya, 29/3-10, reprint edition 2017, Chaukambha Sanskrit Sansthan, Varanasi, 2017;627.
5. Agnivesha, Charaka, Dridhabala, Charaka Samhita Chakrapani teeka, Vimana Sthana, sroto vimana adhyaya, 5/14, reprint edition 2017, Chaukambha Sanskrit Sansthan, Varanasi, 2017;251.
6. Agnivesha, Charaka, Dridhabala, Charaka Samhita Chakrapani teeka, Chikitsa Sthana, Vata shonita Adhaya, 29/21-23, reprint edition 2017, Chaukambha Sanskrit Sansthan, Varanasi, 2017;629.