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Management Of Tao(Thromboangiititis Oblitrance) By Leech Application A Case Study

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Introduction:-

TAO also known as buerger's disease is non atherosclerotic, inflammatory disease of peripheral blood vessels affecting small & medium sized vessels of extrimities.TAO is one of the cause of chronic lower limb ischaemia or CLI (critical limb ischaemia)[1] .It mainly occurs in males habited to smoke . Smoking is strongly associated with disease course & progression. However exact cause of TAO is still not known . Symptoms includes sever cramp like pain in affected limb during walking , (ischaemic pain also called as intermitant claudication) , rest pain , non healing deep painful ulcer at the most distal part of the body like tip of toes,gangrenous patches of skin or subcutaneous tissue or gangrene of distal parts like toes,ischemic changes like coldness of limb , colour changes from pale , redish to blue , loss of hairs ,dry brital nails.

Conservative treatment includes narcotic analgesics as simple NSAID dose not work,buerger's position (elevation of head end of the bed),abstinence from smoking(nicotin in any form should be stopped complitly),vasodialators like prostacyclines or xanthinol nicotinate may given to improve circulation particularly for healing of ulcer.Theses all gives temporary relief . Apart from these chemical sympathectomy or surgical sympathectomy,omentoplasty are tried but not done know a days as the results are not satisfactory & procedure related complications are more & may prove fetal to the life of patient. Conservative amputation of gangrenous toe is done . Amputation below knee or above knee is not needed generally but in sever cases not responding to any treatment may be the last option to get rid of pain. Treatment is bessicaly aimed at reliving pain , healing of ulcer if present , & stoping progress of disease[2]

Inspite of all these treatment measures the patients of TAO have severe pain , they spend sleepless nights & some have suicidal tendancy due to severe pain.(cases are on record that the patients have commited suicide by jumping from 2nd floor of hospital) 3 . So there is still need for effective managent of disease by alternative means.

In present case study one of our patient suffuring from TAO was effectively managed by leech application, *Kaishor Guggulu* & *chandrakala rasa* along with modern treatment regim . This case illustrates the effectiveness of ayurvedic treatment in the management of peripheral vascular disorder.

Case study :-

A 42yrs old male patient named Sidharth Ambhore (OPD no- 18010, IPD no-1034) came to our shalya opd at Ayurved hospital station road,Akola complaining of severe in Lt. Lower foot since last two months,deep painful ulcer at lateral margin of sole near 5th toe since last one month, mummified black 3rd toe since last 20 days.He was very restless , anxious , not able to walk properly . He was so irritable & sensitive that he didn't allowed us to touch his wound for dressing.

H/P/I---patient was aperantly alright 2 months before suddenly he got pain in his Lt leg in calf region which was gradually increasing . He took treatment from general practioner but didn't get relief. He developed deep ulcer at lateral margin of Lt.sole at 5th toe . There after he developed gangrene of 3rd toe. Intensity of pain was very sever in late night hours. He was spending sleepless nights. Finally he consulted an orthopaedic surgeon he gave him following treatment--- Tab.zifi (cefixim) 200mg 1 BD,Tab.rantac150mg 1 BD,Tab.trental(pentoxiphyllin) 400mg 1 TDS, Tab.contramol(tramadol) 1 BD,Tab.Ecosprin 150mb 1 OD. since last 7 days but didn't get relief.There was occlusion of rt. femoral artery in arterial Doppler

report.very minimal blood flow at dorsallis pedis. So he was advoiced below knee amputation.As the patient was poor,due to lack of fund he came to our hospital for further management.

P/H:-- no major illness in past
F/H:-- not specific
Personal history:-- chronic smoker 15-20 Bidi per day
D/H:- allergy to any drug yet not known
O/E- GC-mod,afeb pallor +,no ecterus,no cyanosis,P-92/min,BP-140/90,CVS-NAD,CNS-NAD,P/A-soft
L/E- gangrene at Lt.3rd toe + ,circular, deep ulcer over lateral border of Lt sole near 5th toe, floor - exposed tendon + covered with slough, discharge-mild purulent, size-2*3

With above finding & history diagnosis of TAO was made(already diagnosed as TAO by an orthopaedic surgeon).He was admitted to shalya IPD & posted for amputation of gangrenous 3rd toe & debridment of ulcer on next day.in post operative period he was kept on same treatment as he was receiving from last one week.i.e- Tab.zifi200mg 1 BD,Tab.rantac150mg 1 BD,Tab.Ecosprin150 mg OD , Tab.trental(pentoxiphyllin) 400mg 1 TDS, Tab.contramol(tarmadol) 1 BD.Apart from these Tab.*Kaishor guggulu* 2TDS,Tab.*Chandrakala ras* was added.Patient felt comfortable whole day.but pain was sever since evening not responding to injectable contramol. On 3rd post operative day leech application was started.4 leeches were applied. 2 at the wound site & 2 at sole near amputed toe. He got significant relief in pain emidietly after leech application whole day he was comfortable & intensity of pain reduced in night hours. He was able to walk some distance with bearable pain . Leech application was done after every 3rd day. Day by day there was an improvement in pain intensity. Regular dressing of wound with betadin & hydrogen peroxide was done wound was improving with healthy granulation tissue. 12 seetings of leech application at the interval of 3 days was done.After 7th post operative day allopathic medication was stopped, only *Kaishor guggulu*,*chandrakala ras* & leech application on every 3rd day was done. Amputation stump healed completly after 15 days, & wound near 5th toe was almost healed by one and a half month.patint was able to walk properly. Pain in the wound reduced to great extend. There was tenderness only during dressing.patient was discharged after 15 days & called every day for dressing & leech application after every 3rd day.

Result & discussion:- In cases of PAD like Buerger's disease inspite of modern treatment regim patient is very restless due to burning pain. If modern treatment is added with Leech application,*Kaishor Guggulu*, & *Chandrakala ras*,Considerable relief in pain can be observed. Wound healing is also good with this approach. Saliva of leeches have Hirudin which is having better anticoagulant (platlet aggregation inhibitory action) than heparin.

Anaesthetic & anti-inflammatory componants(Hyaluronidase,Lipase & esterase,Bdellin,Eglin has anti-inflammatory effect) in saliva helps in reducing pain & inflammation. A substance similar to histamine has vasodilator effect.Local blood supply improves,this helps in pain management & accelerating wound healing [4].

Kaishor Guggulu mentioned in *Sharanghdhar samhita* [5] contains *guduchi* (Tinospora cordifolia), *Triphala*,*Sunthi*(zingiber officinalis),*Guggulu* (commiphera mukul),*pippali*(piper nigrum) etc.Over all it has analgesic,anti bacterial,anti-inflammatory,mild laxative property. It is best drug in lowering uric acid in gout patients.It has good action on walls of blood vessels. Effect of *Kaishor Guggulu* & leech application on varicose vein was oberseved in our department(thesis of PG student)[5].It gives good results.

Chandrakala rasa mentioned in *Siddha yogsangraha* [6] is considered to be best medicine for *Pitta Dosha* . It contains drugs having *shit virya* (having cool action).It is useful in *Raktapitta,* diabetes & its neuropathic complications.

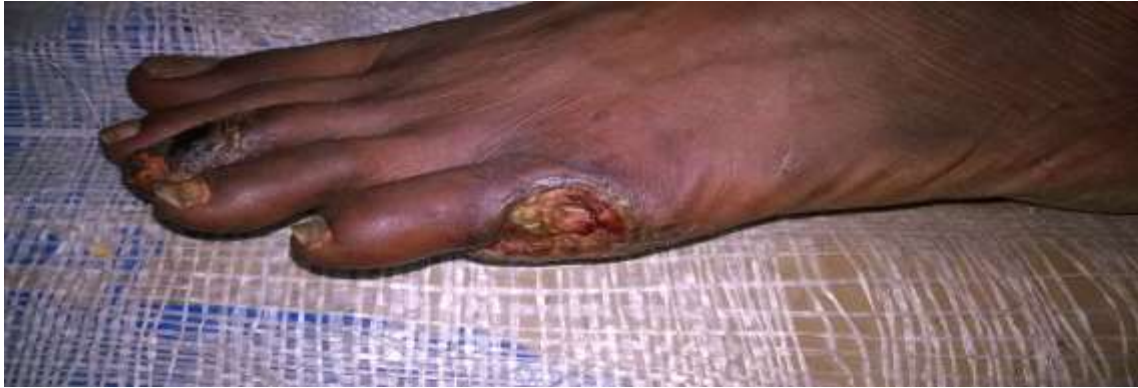
Conclusion :-

1.In Buerger's disease,leech application , *Kaishor Guggulu* & *Chandrakala rasa* along with modern treatment can give good results in pain management & in healing of wound.

2.Concidering result in single case,this treatment regim can be applieid to larger sample to draw appropriate statistical conclusion.

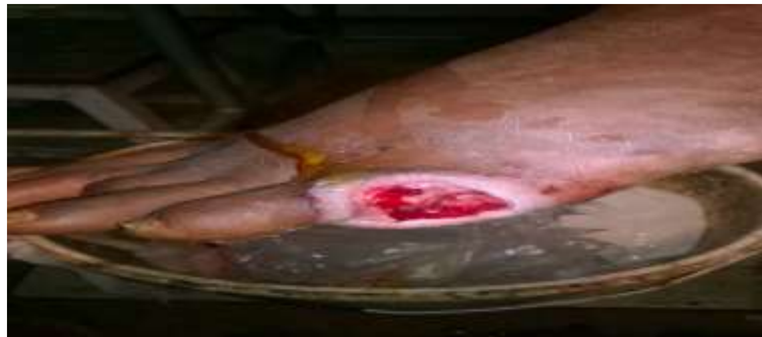
3.Leech application, *Kishor Guggulu* & *Chandrakala rasa* should be tried in every cases of PAD like Renold's disese, atherosclerotic peripheral arterial disease, diabetic wound.

Condition before treatment .



Leech application 1st sitting on 3rd post operative day.

Wound on 10th post operative day.



Amputation stump on 15th post operative day.

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