



A CASE STUDY ON THE PRE-GANGRENOUS STAGE FOLLOWED BY LEECH THERAPY AND AYURVEDA INTERVENTION OF KAISHORE GUGGULU

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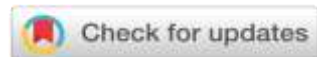
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ABSTRACT

Around the world, a lower leg is amputated every 30 seconds due to gangrene. The mortality rate from diabetic foot gangrene is almost precisely the same as the mortality rate from cancer. When gangrene becomes severe, the only alternative treatments are surgical debridement of the injured tissue (which cannot be reversed) or amputation of the affected limb. The current case study provides an alternative to conventional medical care for chronic wounds & the gangrenous stage that is not healing correctly: Ayurvedic medicine (blood purifier and oxygen-sufficiency enhancer). A 60-year-old woman who had developed a chronic wound which was eventually converting into dry gangrene alongside intense pain was in danger as she was advised to have her left foot amputated below the knee underwent this trial. The patient's gangrenous great toe was extremely painful (80 mm on a 100 mm visual analogue scale) and had necrosed modifications that smelled bad. Aragvadhadi kashaya & Shatdhaut Ghrita were used as wound dressing since it is particularly effective at removing necrotizing areas. Leech Therapy or Hirudotherapy, along with Kishore Guggulu, were used for pain management together to promote healing, oxygen sufficiency & rejuvenation of the skin. Within 25 days, the pain score on a 100 mm visual analogue scale dropped to 0-10 mm, and no more painkillers were needed. Necrotic patches vanished, and the wound healed entirely over almost eight weeks (2 months)

Keywords: gangrene, pre-Gangrene, Leech, Necrosis, Para surgical, Kotha.

INTRODUCTION

There was a hypertensive & non-diabetic female patient of 60 years who came in a wheelchair to Surgery OPD on 8th February 2023 (OPD No. 9521) with blackish discolouration in the great toe. She was diagnosed with a case of left Hemiplegia 10 years back and presently was bedridden. The patient's gangrenous foot was painful and smelly, measuring 80 millimetres on a 100-millimetre WAS ruler as she was experiencing intense pain in her foot and was not able to walk along with consideration of below-knee amputation as a first-line alternative treatment, which was advised by a General Surgeon attached to the AIIMS hospital Jodhpur. At the time of admission, the pa-

tient was well-oriented, vital signs were stable, and Laboratory parameters were as follows- WBC 6610, RBC 3.98, HGB 9.4g%, HCT 34.2, PLT 294, S, Creatinine 0.73 Glucose Random 118.0, ESR 20, C- Reactive Protein CRP Serum 15.5 Her CT Angiography of the right lower limb showed: Thrombosed right superficial femoral artery in the entire course—severely attenuated distal anterior tibial and posterior tibial arteries.

Intervention: For the abovementioned case, we used leech therapy as an interventional method every second week and oral medicine (Kishor Guggulu) in 500mg twice daily.

Treatment & Procedure-



Fig. 1

Fig.1- Baseline day-blackish discolouration of Great toe with intense pain and foul smell, Pedal oedema++, when a patient came.

Fig.2-0th Day, when Treatment started, two leeches were applied after minimal debridement and extraction of the slough. Alongside Tab, *Kaishore Guggulu* was given to the patient in a dose of 500 mg BD.



Fig. 2



Fig. 3

Pedal oedema was on the lower side, and pain on the visual analogue meter was recorded at 70mm immediately after application.

Fig. 3-1st week- Again, three leeches and oral medicine were applied at the necrosed site. There was a 2 mm reduction in the size & depth of the wound, and pain was recorded at 40 mm on a visual analogue scale. Oral medicine was in continuation.



Fig.4



Fig.5



Fig.6

Fig.4- After **three weeks** of Leech therapy & continuation of *Kaishore Guggulu* medicine, the picture shows Debridement/removing the affected tissue & achieving healthy pinkish granulation of tissue offering healing. Pain was recorded at 20 mm on a WAS scale ruler.

Fig.5- After **five weeks**, betterment in progression & prevention of gangrenous tissue & reverting it towards normal skin colouration. Now, pedal oedema was seen. The patient was still taking oral medication, but the pain was recorded at 00 mm on a WAS ruler. The patient was not experiencing any pain & was physically comfortable resting her foot on the floor.

The Laboratory parameters taken at that time were Hb was 9.6 g%, TLC 600/cm³, N52, L38, E08, Mo2, RBC 3.96 mill/cum, PCV 32.4%, platelets 2.69 lakhs/cumm, MCV 80.8 fL, MCH 27.5 Pg, MCHC 32.3 g/dl and ESR 28 mm/hours and C- Reactive Protein CRP Serum 2

Fig. 6- After **seven weeks**, fully achieved normal skin colouration after auto Amputation of the Great toe without suggestive amputation up to below the knee. Now, oral medicine and procedures were terminated.

Result-

In this case, a comprehensive treatment approach combining leech therapy and the administration of *Kishore Guggulu* herbal medicine was employed to address a severe condition of gangrene affecting the great toe. The initial presentation showcased a distressing situation with blackish discol-

ouration, intense pain, and pedal oedema. However, as detailed in the provided figures, the treatment demonstrated significant efficacy over seven weeks. Notably, the progression included a reduction in the size and depth of the wound, the development of healthy granulation tissue, and the eventual auto-amputation of the great toe. The patient's experience of pain, which was initially excruciating, steadily decreased and ultimately subsided entirely. The successful management of this case highlights the potential of a combined therapeutic approach, underscoring the importance of holistic care in severe medical conditions.

It's crucial to emphasise that the treatment described in this case appears to be based on traditional and alternative medical practices. While it yielded positive outcomes in this specific scenario, medical conditions should be addressed under the guidance of qualified healthcare professionals. The presented case underscores the value of exploring various treatment modalities and the potential for positive results in complex medical cases.

DISCUSSION

After reviewing several articles relevant to the combined therapeutic effects (Leech therapy & polyherbal formulation), we found many clinical studies have been conducted in different parts of the world to observe the scientific action of leech therapy. Study reveals that sponges have been

carried out to keep the healing of complicated varicose veins, Gangrene, DVT, Diabetic foot ulcers and pain reduction in inflammatory conditions and other disorders.

With the above support, leech therapy, a traditional practice with roots in ancient medicine, combined with the herbal medication *Kaishore Guggulu*, appeared to play a vital role in facilitating the healing process. The symptoms appearing in the gradual reduction in the wound's size and depth, as well as the transition from a blackish discolouration to healthy pinkish granulation tissue, demonstrates the efficacy of this combined approach because of the presence of forty different types of substances as Hirudin, Galin, Factor Xa inhibitor, New Leech protein 1, Destabilase, Antihistacin, Hirsutasin, Ghilantens, Eglin C, and many others. Due to the Anti-inflammatory properties of Kishore Guggulu, the significant laboratory finding of C-reactive protein typically reduced from 15(baseline) to 2(after five weeks), showing betterment in the progression of the gangrene.

This above discussion is made on the supportive documentation/research provided by Syal Kumar, Journal of evidence-based integrative medicine/Clinical Significance of Leech Therapy in Indian Medicine/Nov.20/2012/30-31.

CONCLUSION

Integrating leech therapy with the herbal medication *Kaishore Guggulu* proved instrumental in expediting the healing process, as evidenced by the observable shift from initial symptoms to a gradual reduction in wound size and depth. The primary outcome of this case study was the level of amputation was reduced/prevented up to just the great toe instead of below-knee amputation as advised previously, and it was auto-amputated.

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