



## THE EFFECT OF BILVADI AGADA ANJANA IN A CASE OF SEPTIC SHOCK -A CASE REPORT

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## ABSTRACT

Any kind of poison retained in the body after partial expulsion, or which has provisionally undergone detoxification by anti-poisonous drugs is considered *Dooshivisha*. A male patient aged 67 years was presented in the OPD in an unconscious state with unstable vitals. The patient had Chronic infective ulcer with gangrene in lower limbs, with features of sepsis. Even if the patient was under antibiotic therapy, due to age and low immune status, he had gone into a state of septic shock. The condition was considered a case of *Dooshivisha* (Internal toxins) in the system and *Bilwadi Agada Anjana* was done in the patient. The results were satisfactory with the overall improvement in the general condition. The results were recorded with pre-treatment and post-treatment observation.

**Keywords:** *Anjana Karma, Bilwadi Gutika, Dooshivisha, Sepsis, Septic Shock*

## INTRODUCTION

Sepsis is a life-threatening organ dysfunction caused by a dysregulated host response to infection<sup>1</sup>. Sepsis is caused by severe infection due to increasing microbes in the blood that result in overwhelming

inflammation<sup>2</sup>. Infection can be due to bacteria, viruses, or fungi<sup>3</sup>. Common infections include- Cellulitis & Skin infection, UTI, Dental abscess, Viral respiratory illness by Influenza, SARS CoV-2, and

Pneumonia by bacteria, virus, or fungi<sup>4</sup>. When the inflammation is severe, the organs of the body get injured. Blood pressure may become very low. Then the condition is considered as Septic Shock. It is a severe condition with poor prognosis. It has a mortality rate of 50%<sup>5</sup>. Epidemiology of adult population sepsis in India are showing ICU mortality, hospital mortality, and 28-day mortality of 56%, 63.6%, and 62.8% respectively<sup>6</sup>. Patients at high risk for sepsis are elderly, with a weak immune system, and patients with severe or hard-to-treat infections on long-term antibiotics<sup>7</sup>. A patient with sepsis can have difficulty in breathing causing oxygen levels to drop, BP can also drop, and the patient may appear drunk, drowsy, or hard to arouse<sup>8</sup>. *Dushivisha* is consisting of two words *Dushi* & *Visha*. *Dushi* means denatured, attenuated, altered, latent, vitiated, or something which influences the system in the long run. *Visha* means poison<sup>9,10</sup>. Any kind of poison retained in the body after partial expulsion, or which has provisionally undergone detoxification by anti-poisonous drugs is considered *Dushivisha*. In a patient with a chronic infective ulcer with gangrene, with features of sepsis, there is a toxic load in the body. Even if the patient was under antibiotic therapy, due to age and low immune status, they had gone into a state of septic shock. The condition was considered a case of *Dooshivisha* (Internal toxins), and *Bilvadi Agada Anjana* was done on the patient.

#### PATIENT INFORMATION

A male patient aged 67 years suddenly developed pain and swelling in bilateral lower limbs below knee till toes before 3 months. Within 3-4 days he developed multiple ulcers a/o pricking pain, profuse purulent discharge, and foul smell in the same area. For this, he was under treatment in a nearby allopathic hospital. In the last 2 weeks, the patient developed fever and weakness. So, he got admitted to the same hospital. In the past 1 week, the condition worsened with no oral intake and increased weakness. For 1 day, the patient is unconscious. So, he was discharged on request and consulted in the OPD.

The past history revealed that he was a known case of varicose veins for 20 years and a known case of DVT

for 3 months. The history was not significant for diabetes mellitus, hypertension, any previous surgery, or trauma. The patient was under antibiotic therapy of Injection Amoxicillin 1gm IV 12<sup>th</sup> hourly for the past 14 days. Personal history revealed that he was a chronic smoker for 40 years and habit of taking fish daily.

#### Clinical Findings and Diagnostic Assessment

The patient was unconscious with a Glasgow Coma Scale Score of 7. Blood pressure of the patient was 90/60 mm of Hg in the supine position, pulse rate 45 beats /minute, respiratory rate 24/min and SPO<sub>2</sub> of 75% and temperature of 97.6-degree F. Local examination of bilateral lower limbs revealed multiple ulcers with an irregular shape, foul odor, sloping to punched out edge, gangrenated floor with slough and Sero-purulent discharge. The surrounding area was black with swelling. On palpation the ulcers were cold, tender, non-bleeding on touch, rough floor, rough and indurated margin, and hard and indurated base. Peripheral pulses were feeble bilaterally till the popliteal artery. Investigations at the time of admission showed an Hb% of 8.4mg/dl, RBS of 116mg/dl, and TC of 11900/cc.mm, DC of N<sub>80</sub>, L<sub>28</sub>, M<sub>6</sub>, E<sub>5</sub>, B<sub>0</sub>, ESR of 150mg/dl, Na of 130mg/dl, K of 4mg/dl, Cl of 92mg/dl. The RAT test was negative in the patient.

#### NIDANA IN PATIENT

- Chronic smoker(toxins)
- Intake of fish daily (causes skin disorders, increases kapha)
- K/C/O of Varicose veins, DVT (Chronic illness)
- A chronic nonhealing ulcer which is infective and gangrenated (Bacterial load in the blood)

#### SAMPRAPTHI<sup>11</sup>

*Visha* (toxins) gets accumulated in the body by long-term consumption of substances causing toxicity or any chronic diseases with impaired metabolism or any infective pathology. The patient was under antibiotic therapy, so it attained inertness. The inert nature, over a period of time, is marked by the *Kapha dosha* (*Kaphavrutam*) and is understood as *Dushivisha*.

#### POORVA ROOPA<sup>12</sup>

Generalized weakness

#### ROOPA<sup>13</sup>

Loss of taste, fainting, limbs drop-down, patient became like a bird with severed wings.  
Therapeutic Intervention and Observations

DIAGNOSIS: *Dushivisha* in the system (Septic shock with unstable vitals)

**Table 01:** Vitals at time of admission

Date	Time	BP (mmHg)	SPO <sub>2</sub> (%)	Pulse(/min)
21/6/2021	5.15 PM	90/60	75	45

The patient was given 1 pint NS stat and Inj Amoxicillin 1gm IV stat

**Table 02:** Vitals at hourly observations on the day of admission

Date	Time	BP (mmHg)	SPO <sub>2</sub> (%)	Pulse (/min)
21/6/2021	6.15 PM	90/60	54	54
21/6/2021	7.15 PM	90/60	49	40

Oxygen 2 L was started in the patient. *Bilvadi agada anjana* was applied from inner canthus to outer canthus as *Chooranajana* in both eyes.

**Table 03:** Vitals at hourly observations on the day of admission after *Bilvadi agada Anjana* application

Date	Time	BP (mmHg)	SPO <sub>2</sub> (%)	Pulse (/min)
21/6/2021	7.30 PM	90/60	49	28
21/6/2021	8 PM	90/60	62	42
21/6/2021	9 PM	90/60	60	42
21/6/2021	10 PM	90/60	75	40
21/6/2021	11 PM	90/60	97	90

The patient became conscious. The next day Oxygen 2 L was disconnected. Oral intake of *Ganji tili* was given to the patient. *Bilvadi gutika* 1 BD orally and *Bilvadi agada Anjana* 1 BD was started in the patient. Cleaning and dressing of wounds were done under aseptic precaution.

**Table 04:** Vitals on the second day of *Bilvadi agada Anjana*

Date	Time	BP (mmHg)	SPO <sub>2</sub> (%)	Pulse (/min)
22/6/2021	7 AM	90/60	100	70
22/6/2021	10 PM	90/60	99	84

The next day GC of the patient became stable with a good appetite in the patient.

**Table 05:** Vitals on the third day of *Bilvadi agada Anjana*

Date	Time	BP (mmHg)	SPO <sub>2</sub> (%)	Pulse (/min)
22/6/2021	7 AM	90/60	99	80
22/6/2021	10 PM	90/60	99	84

## DISCUSSION

*Bilvadi gutika* is one of the widely accepted *agada* used in *Anjana* in *Visha Chikitsa*. While explaining about the preparation of *Bilvadi gutika*, Acharya

*Vagbhata* used the term *Susookshna pistam* i.e all drugs should be made into a fine paste, and this for easy absorption of the drugs. The ocular absorption of *Anjana* may initiate through the conjunctiva and sclera. Once it crosses the conjunctiva, the sclera is more permeable and it allows the drugs to penetrate

other interior structures of the eye *i.e* ciliary body, iris, aqueous humor, lens, and vitreous humor. Due to increased vascularization of the conjunctiva, ciliary body, and iris, a considerable amount of drug is expected to enter the systemic circulation. The amount of drug which can cause a difference in the systemic function by ocular absorption is still not fully understood. Ocular absorption of *Bilvadi Anjana* into the systemic circulation and its action further requires detailed studies as current contemporary physiology cannot fully explain the extent of action. Some *Vishavaidyas* of Kerala opine that the action of this formula is due to *Samyoga visheshata*. Thus, *Prabhava* of the drug should be considered. All the drugs of *bilvadi gutika* are *Ushnaveerya* and the majority are *Katu vipaka* which acts quickly on *visha*. It is *Kaphavatanut* thus helping to remove *Kapha avarana* in the condition of *Dushivisha*.

## CONCLUSION

Knowledge of toxicology is very essential in this era as we constantly get exposed to toxins in one or the other way. *Bilvadi gutika Anjana* has shown significant effects in the case of a patient with signs of septic shock. Contemporary knowledge of physiology cannot fully explain the mode of action of *Anjana* by ocular absorption alone.

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