

## **HIRUDOTHERAPY PROTOCOL WITH *HIRUDO VERBANA* FOR ADULT PATIENTS WITH ARTERIAL HYPERTENSION**

Clinical and Home-Based Practice Modalities

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### **INTRODUCTION**

Hirudotherapy with *Hirudo verbana* is used as a complementary therapy in patients with arterial hypertension, based on accumulated clinical experience from physicians and leech therapists, as well as the known physiological effects of leech saliva on microcirculation and blood fluidity.

This protocol defines two levels of application: clinical/hospital setting and professional home-based care.

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### **A. MEDICAL PROTOCOL**

#### **CLINIC / HOSPITAL**

##### **A.1 OBJECTIVE**

To apply hirudotherapy as a complementary therapeutic support in patients with arterial hypertension under direct medical supervision, without replacing conventional pharmacological treatment.

## A.2 INDICATIONS

- Grade I or II arterial hypertension
- Clinically stable patients
- Active antihypertensive treatment
- Documented medical indication
- Signed informed consent

## A.3 CONTRAINDICATIONS

- Coagulation disorders
- Moderate or severe anemia
- Immunosuppression
- Pregnancy
- Active infections
- Critical arterial insufficiency
- Unadjusted therapeutic anticoagulation

## A.4 PRE-TREATMENT EVALUATION

- Complete medical history
- Resting blood pressure (two measurements)
- Complete blood count
- Coagulation tests
- Review of current medication

## A.5 ANTIBIOTIC PROPHYLAXIS

- Antibiotic coverage against *Aeromonas* spp.
- Initiation prior to the session
- Mandatory documentation in the medical record

## A.6 DOSAGE AND APPLICATION

- Initial session: 5–10 leeches
- Subsequent sessions: 10–20 leeches
- Application sites: paravertebral dorsal, sacral region
- Duration: 30–90 minutes
- Spontaneous detachment only

## A.7 MONITORING

- Blood pressure before, during, and after treatment
- Vital signs monitoring
- Bleeding control
- Hemoglobin monitoring if required

## A.8 FREQUENCY

- Interval: 7–10 days
- Cycle: 4–6 sessions
- Medical reassessment at the end of each cycle

## A.9 POST-TREATMENT CARE

- Sterile compressive dressing
- Clinical observation as needed
- Monitoring for infection or prolonged bleeding

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## B. PROFESSIONAL PROTOCOL

### HOME-BASED LEECH THERAPIST PRACTICE

#### B.1 OBJECTIVE

To apply hirudotherapy safely in a home-based setting within the professional scope of the leech therapist, as a complementary therapy.

#### B.2 PATIENT ACCEPTANCE CRITERIA

- Prior medical diagnosis of hypertension
- Clinically stable patient
- Ongoing medical follow-up
- Specific informed consent for home treatment

### B.3 HOME-BASED CONTRAINDICATIONS

- Uncontrolled hypertension
- Known anemia
- Use of anticoagulants
- History of excessive bleeding
- Active infections
- Pregnancy

### B.4 PRE-TREATMENT HOME EVALUATION

- Summarized medical history
- Resting blood pressure measurement
- Skin and circulation assessment
- Confirmation of current medication

### B.5 SAFE DOSAGE

- First session: 3–5 leeches
- Subsequent sessions: 5–8 leeches
- Maximum: 10 leeches
- Application sites: lower dorsal, sacral region
- Avoid neck, face, abdomen, and major vessels

### B.6 PROCEDURE

- Strict hygiene of the application area
- Controlled application
- Continuous patient observation
- Spontaneous detachment only

### B.7 POST-APPLICATION CARE

- Sterile compressive dressing
- Written post-care instructions
- Relative rest for 24 hours
- Adequate hydration

## B.8 FOLLOW-UP

- Blood pressure measurement at 24 and 48 hours
- Detailed session documentation
- Communication with the treating physician if necessary

## B.9 FREQUENCY

- Interval: 10–14 days
- Cycle: 3–4 sessions
- Mandatory reassessment before continuation

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## FINAL CONSIDERATIONS

- Hirudotherapy does not replace medical treatment
- Exclusive use of certified *Hirudo verbana*
- Single use per leech
- Disposal according to biological waste regulations

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## PROTOCOL RESPONSIBLE

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