The beneficial role of Hirudotherapy for different chronic venous diseases

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Chronic venous diseases as chronic venous insufficiency, thrombophlebitis, phlebothrombosis and post-thrombotic syndrome are some of the most traditional indications for hirudotherapy.

Introduction
Compared to conventional pharmacological and interventional treatment methods, leech therapy has a very broad range of uses in various fields of medicine. To understand why this is so, one must analyze the potential and known mechanisms of leech therapy. Before the arrival of heparin, leech therapy has been an established method for acute treatment of deep leg vein thrombosis and superficial thrombophlebitis. In our study we present the results of our patients’ vascular care standard therapeutic procedures with Hirudotherapy. Patients were divided into five groups (CVI II-IV CEAP; CVI VI CEAP, Post-thrombotic syndrome, Acute thrombophlebitis, VSM, VSP; Acute phlebothrombosis VP, VTP, VFI). Preliminary results show the benefit of combination therapy - improvement of subjective symptoms and objective criteria. The authors, based on literature data and their experience recommend a combined therapy in indicated cases of patients with chronic venous diseases.

Diagnosis

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Objective criteria</th>
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<tbody>
<tr>
<td>a) Chronic venous insufficiency (CVI II-IV; VI stage CEAP classification)</td>
<td>Increased stasis in leg veins, increased of blood pressure in the veins</td>
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<tr>
<td>b) Post-thrombotic syndrome</td>
<td>Increased edema, increased swelling of the affected leg, decreased of blood</td>
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<tr>
<td>c) Thrombophlebitis</td>
<td>Increased edema, increased swelling of the affected leg, increased of blood</td>
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<tr>
<td>d) Phlebothrombosis</td>
<td>Increased edema, increased swelling of the affected leg, decreased of blood</td>
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Results

Post-thrombotic syndrome

Thrombophlebitis

Complications

- excessive bleeding
- scars
- infection caused by bacteria Aeromonas hydrophila
- allergic reactions, itching

Conclusions

- combined therapy - improvement of subjective symptoms and objective criteria
- CLASSICAL therapy (LOCAL therapy – decongestion, recovery of cutaneous circulation and COMPLEX therapy - vasoilation, anti-inflammatory and anti-hemostatic) + HIRUDOTHERAPY
- overall clinical enhancement of health state, recanalisation in vein

Ultrasonography - Doppler

Diagnosis: thrombophlebitis of distal v. poplitea and medial branch of calf vein, absence of recanalisation.

Fig. 1: Arteria and v. poplitea under Hunter’s canal; over thrombus = normal arteria and vein, left – no compression, right – compression, vein is without thrombosis.

Fig. 2: Before application of leeches: distal section of the arteria and v. poplitea (in the slot at the knee joint) - thrombosis is formed (gray color). V. poplitea is completely filled of subacute, homogenous hypoechogenal thrombus – gently dilated (a, b, c, right), a poplitea (black color)

Fig. 3: After application of leeches: a) partial recanalisation in v. poplitea – 30% (red color – blood flow in 1/3 of vein), b) red color – peripheral thrombus drain – flow in 2/3 of vein

Fig. 4: Complete recanalisation in v. poplitea (red color), without thrombosis.