

Herbs for the Treatment of Venous Disorders

Horsechestnut

Aesculus hippocastanum seeds are venotonic, antioedematous and anti-inflammatory. The major constituents of Horsechestnut are saponins (3 to 6%), collectively referred to as escin (aescin).

Horsechestnut was used in traditional medicine for conditions of venous congestion, particularly with dull, aching pain and fullness; rectal irritation, rectal neuralgia, proctitis and haemorrhoids.

In clinical trials Horsechestnut:

- reduced signs and symptoms such as oedema, pain, itchiness and feeling of fatigue and was as effective in reducing oedema as elastic stocking compression therapy in chronic venous insufficiency;¹
- lowered blood viscosity in patients with varicose veins of the lower extremities;
- reduced leg volume in women with pregnancy-induced varicose veins;
- reduced the incidence of deep venous thrombosis following surgery (by injection).

As with all saponin-containing herbs, oral use of Horsechestnut may cause irritation of the gastric mucous membranes and reflux. This is avoided by the use of enteric-coated preparations.

Butcher's Broom

Ruscus aculeatus rhizome has been regarded as a diuretic and traditionally used both orally and locally for the treatment of haemorrhoids. Scientific studies have indicated it has anti-inflammatory and venotonic activity.

The main constituents are steroidal saponins (0.5-1.5%), which consist of the aglycones ruscogenin and neoruscogenin and their glycosides. The Commission E recommends that Butcher's Broom can be used as supportive therapy for chronic venous insufficiency and haemorrhoids.

The clinical trials summarized below were conducted using a preparation containing Butcher's Broom extract, hesperidin methylchalcone (a flavonoid) and ascorbic acid.

In these clinical trials Butcher's Broom combination:

- decreased venous diameter and increased flow parameters of deep veins and decreased flow parameters in superficial veins in primary varicose vein disease;²
- improved venous tone in patients with varicose veins;³
- improved symptoms, venous distensibility and venous capacity in chronic venous disorders of the lower limbs;^{4,5}
- decreased ankle circumference and improved clinical symptoms (sensation of evening oedema, pruritus, tired legs,⁶ heavy and painful legs, cramps^{6,7}) and was more effective than hydroxyethyl rutoside (a derivative of the flavonoid rutin)⁸ in the treatment of chronic venous insufficiency of the lower limbs;
- reduced arm oedema in patients with secondary lymphoedema following previous treatment for breast cancer;⁹
- increased blood velocity parameters in post-thrombotic syndrome.¹⁰

Ginkgo

Scientific studies indicate that *Ginkgo biloba* leaves stimulate the circulation, enhance tissue perfusion and have antioxidant and anti-PAF (platelet activating factor) activities. The anti-PAF activity of Ginkgo may be of benefit in the treatment of ischaemia.

All clinical trials have been conducted using a concentrated extract which is usually standardized to contain 24% flavonoid glycosides (ginkgo flavone glycosides) and 6% terpenoids (ginkgolides, bilobalide). With its high flavonoid content and complementary actions, Ginkgo combines well with Butcher's Broom and Horsechestnut in the treatment of venous disorders.

In clinical trials standardized Ginkgo extract:

- improved the symptoms of peripheral arterial disease and was as effective as pentoxifylline (phosphodiesterase inhibitor) in improving pain-free walking distance in intermittent claudication;

- improved peripheral arterial circulation in the legs of female geriatric patients;¹¹
- decreased blood viscosity and elasticity in patients with arteriosclerotic circulatory disturbances and pathologically increased whole blood viscosity;¹²
- improved the symptoms of cerebral insufficiency and related conditions: primary degenerative dementia, dizziness associated with labyrinth and/or vestibular disorders, acute cochlear deafness, senile cognitive decline, vertigo and hearing loss;
- improved cerebral blood flow, motor recovery, intellectual performance, memory, mood and behaviour in recent stroke victims;
- delayed symptom progression in mild to severe Alzheimer's disease and multi-infarct dementia and was as effective as cholinesterase inhibitors in the treatment of mild to moderate Alzheimer's dementia;¹³
- improved cognitive processing speed and subjective ratings of memory improvement in cognitively intact older adults (55-86 years)¹⁴ and cognitive ability, including long-term memory and abstract reasoning, in adults;
- improved attention in healthy young volunteers (acute administration);¹⁵
- had benefit over naftidrofuryl (a vasodilator) in idiopathic sudden hearing loss (existing no longer than 10 days);
- improved blood vessels, visual acuity, the field of vision, near and far vision and colour recognition in patients with blockage of veins in the retina;
- improved visual acuity in senile macular degeneration;
- decreased vasomotor disorders of the extremities and prevented acute mountain sickness for moderate altitude (5400 m).

- Disorders where local tissue oedema may be involved, such as trigeminal neuralgia, carpal tunnel syndrome, repetitive strain injuries.
- May assist in reducing the risk of deep vein thrombosis following surgery.
- Stroke of recent onset.
- Peripheral arterial disease, intermittent claudication (supplemented with additional Ginkgo).
- Idiopathic sudden hearing loss.

Cautions and Contraindications

Caution is advised with patients on anticoagulant or antiplatelet medication. Drug-induced lymphocytic colitis has been reported with the use of Butcher's Broom combination.¹⁶ This leads to chronic diarrhoea.

REFERENCES

Except where specifically referenced, the following book was referred to in the compilation of this technical information:

Mills S, Bone K. *Principles and Practice of Phytotherapy: Modern Herbal Medicine*. Edinburgh: Churchill Livingstone, 2000.

¹ Pittler MH et al. *Arch Dermatol* 1998; **134**: 1356 ² Jager K et al. *Clin Drug Invest* 1999; **17**: 265 ³ Weindorf N et al. *Z Hautkr* 1987; **62**: 28 ⁴ Cappelli R et al. *Drugs Exp Clin Res* 1988; **14**: 277 ⁵ Boccalon H et al. *Int Angiol* 1998; **17**: 155 ⁶ Parrado F et al. *Clin Drug Invest* 1999; **18**: 255 ⁷ Elbaz C et al. *Phlebology* 1976; **29**: 77 ⁸ Beltramino R et al. *Int Angiol* 1999; **18**: 337 ⁹ Cluzan RV et al. *Lymphology* 1996; **29**: 29 ¹⁰ Marshall M. *Fortschr Med* 1984; **102**: 772 ¹¹ Augustin P. *Psychol Med* 1976; **8**: 123 ¹² Witte S. *Clin Hemorheol* 1983; **3**, abstr 144 ¹³ Wettstein A. *Phytomedicine* 2000; **6**: 393 ¹⁴ Mix JA et al. *J Altern Complement Med* 2000; **6**: 219 ¹⁵ Kennedy D et al. *Psychopharmacology* 2000; **151**: 416 ¹⁶ Tysk C. *Lakartidningen* 2000; **97**: 2606

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Synergistic Formulation

These herbs with a unique blend of phytochemicals including saponins and flavonoids complement each other in a very potent formulation with the following actions:

- venotonic, circulatory stimulant,
- tissue perfusion enhancer, anti-ischaemic,
- antioedematous, anti-inflammatory,
- antioxidant, anti-PAF.

Such a combination would be best formulated as an enteric-coated tablet to reduce the risk of reflux from the high doses of saponins which are necessary to confer clinical benefit.

Indications

- Chronic venous insufficiency.
- Oedema of the lower limbs, varicose veins.
- Haemorrhoids.
- Lymphoedema, ascites.
- Thrombophlebitis.