Review: Horse chestnut seed extract is effective for symptoms of chronic venous insufficiency

Pittler MH, Ernst E. **Horse chestnut seed extract for chronic venous insufficiency.** Cochrane Database Syst Rev. 2006;(1):CD003230.

Clinical impact ratings: GIM/FP/GP ★★★★★★☆ Hematol/Thrombo ★★★★★☆☆

QUESTION

In patients with chronic venous insufficiency, is oral horse chestnut seed extract (HCSE) more effective in treating symptoms than placebo, compression stockings, or other drugs?

METHODS

Data sources: Cochrane Peripheral Vascular Diseases specialized register (includes searches of MEDLINE, EMBASE/Excerpta Medica, relevant journals, and conference abstracts) (October 2005), Cochrane Central Register of Controlled Trials (Issue 3, 2005), Allied and Complementary Medicine (July 2005), Phytobase (January 2001), manufacturers of HCSE, experts in the field, and bibliographies of relevant studies.

Study selection and assessment: Randomized controlled trials (RCTs) that evaluated clinical outcomes in patients with adequately diagnosed chronic venous insufficiency and compared oral preparations containing HCSE as the only active component with placebo or another therapy. 17 RCTs (n = 1581) met the selection criteria: HCSE was compared with placebo in 12 RCTs (n = 1280), compression in 2 RCTs (n = 595), O-β-hydroxyethyl rutoside in 4 RCTs (n = 261), and pycnogenol in 1 RCT (n = 40). Mean patient age range was 40 to 60 years. Duration of treatment was 2 to 16 weeks (median 4 wk). 2 reviewers independently assessed methodological quality of the included studies for randomization, blinding, withdrawals, and allocation concealment. All studies but 1 were double-blinded.

Outcomes: Leg pain, pruritus, edema, leg volume, circumference at the ankle and calf, and adverse events.

MAIN RESULTS

Heterogeneity precluded meta-analysis for many comparisons. Compared with placebo, HCSE reduced leg pain in 6 of 7 RCTs, edema in 4 of 6 RCTs, pruritus in 4 of 8 RCTs, ankle circumference in 5 of 7 RCTs, calf circumference in 3 of 7 RCTs, and leg volume in a meta-analysis of 6 of 7 RCTs (Table). HCSE did not differ from compression (Table), O-β-hydroxyethyl rutoside, or pycnogenol for symptom relief. Such adverse events as gastrointestinal complaints, dizziness, nausea, headache, and pruritus were reported in some patients receiving HCSE in 6 RCTs, whereas 8 RCTs reported no adverse events or good tolerability.

CONCLUSION

Horse chestnut seed extract is an effective short-term treatment for symptoms of chronic venous insufficiency.

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For correspondence: Dr. M. Pittler, Peninsula Medical School, Universities of Exeter and Plymouth, Exeter, England, UK. E-mail M.H.Pittler@ex.ac.uk.

Horse chestnut seed extract (HCSE) vs placebo or compression for chronic venous insufficiency at 2 to 16 weeks*

Outcomes	Number of trials (n)	Event rates		RBI (95% CI)	NNT (CI)
		HCSE	Placebo		
Improvement in leg pain	1 (418)	63%	44%	45% (23 to 65)	6 (4 to 10)
Improvement in edema	1 (346)	66%	41%	61% (35 to 83)	4 (3 to 7)
Improvement in pruritus	1 (196)	67%	51%	32% (4.7 to 54)	7 (4 to 43)
		Comparisons		Weighted mean difference (CI)	
Reduction in lower leg volume (mL)	6 (502)	HCSE vs placebo		32 (13 to 51)	
Reduction in ankle circumference (mm)	3 (80)	HCSE vs placebo		4.7 (1.1 to 8.3)	
Reduction in calf circumference (mm)	3 (80)	HCSE vs placebo		3.5 (0.6 to 6.5)	
Reduction in lower leg volume (mL)	2 (479)	HCSE vs compression		–37 (–104 to 29)	
Improvement in symptom score (40-point scale)	1 (285)	HCSE vs compression		0.4 (–1.1 to 1.9)	

*Abbreviations defined in Glossary; RBI, NNT, and CI calculated from data in article using a random-effects model.

COMMENTARY

Chronic venous insufficiency, one of the most prevalent medical conditions in the general population, is costly, burdensome, and an important public health problem (1). Management primarily involves mechanical methods, usually graduated compression stockings. While these have been shown to reduce swelling caused by venous hypertension, their effect on venous symptoms is less clear (2). Sclerotherapy or venous surgery is sometimes used to treat varicosities (2). Safe and effective oral therapies could provide patients with an attractive alternative to existing treatment options. Oral HCSE, an herbal remedy whose active component is escin, is one such potential alternative.

The review by Pittler and Ernst evaluated existing RCTs on the effectiveness and tolerability of HCSE in patients with mild-to-moderate chronic venous insufficiency. Their analysis showed that short-term (median 4 wk) use of HCSE improved leg pain, edema, and itching more than placebo, and reduced leg volume and circumference more than placebo and to a similar extent as compression.

While interesting, these findings seem to have limited clinical applicability. First, the trials reviewed were heterogeneous with respect to their methodological quality, the dose of escin administered, and the outcomes assessed and how they were measured. These factors may affect the validity and generalizability of the results. Second, such adverse events as gastrointestinal upset or dizziness were reported in up to one third of patients in about half of the trials. Third, as only short treatment durations were studied, the effectiveness and safety of HCSE for long-term management of patients with chronic venous insufficiency is as yet unproven and long-term use cannot be endorsed. Pending more rigorous study of HCSE in large, well-conducted RCTs with longer treatment exposures, HCSE could be tried for short-term relief of symptoms or edema in patients who do not benefit from or tolerate compression.

Susan R. Kahn, MD, MSc
Sir Mortimer B. Davis Jewish General Hospital
Montreal, Quebec, Canada

References

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