

## **Cost-utility analysis of great saphenous vein ablation with radiofrequency, foam and surgery in the emerging health-care setting of Thailand**

Boonying Siribumrungwong, Pinit Noorit, Chumpon Wilasrusmee, Pattara Leelahavarong, Ammarin Thakkinstian and Yot Teerawattananon

---

### **Abstract**

**Background:** We conducted economic evaluations of radiofrequency ablation, ultrasound-guided foam sclerotherapy and surgery for great saphenous vein ablation.

**Method:** A cost-utility and cohort analysis from societal perspective was performed to estimate incremental cost effectiveness ratio. Transitional probabilities were from meta-analysis. Direct medical, direct non-medical, indirect costs, and utility were from standard Thai costings and cohort. Probabilistic sensitivity analysis was performed to assess parameter uncertainties.

**Results:** Seventy-seven patients (31 radiofrequency ablation, 19 ultrasound-guided foam sclerotherapy, and 27 surgeries) were enrolled from October 2011 to February 2013. Compared with surgery, radiofrequency ablation costed 12,935 and 20,872 baht higher, whereas ultrasound-guided foam sclerotherapy costed 6159 lower and 1558 bath higher for outpatient and inpatient, respectively. At one year, radiofrequency ablation had slightly lower quality-adjusted life-year, whereas ultrasound-guided foam sclerotherapy yielded additional 0.025 quality-adjusted life-year gained. Because of costing lower and greater quality-adjusted life-year than other compared alternatives, outpatient ultrasound-guided foam sclerotherapy was an option being dominant. Probabilistic sensitivity analysis resulted that at the Thai ceiling threshold of 160,000 baht/quality-adjusted life-year gained, ultrasound-guided foam sclerotherapy had chances of 0.71 to be cost-effective.

**Conclusion:** Ultrasound-guided foam sclerotherapy seems to be cost-effective for treating great saphenous vein reflux compared to surgery in Thailand at one-year results.

**Keywords:** radiofrequency ablation, foam sclerotherapy, varicose vein, cost-utility, economic evaluation

Phlebology 2016, Vol. 31(8) 573–581

DOI: 10.1177/0268355515604258