Outcomes of Short-term Compression Therapy Following Varicose Vein Surgery: Application of the Meta-analysis

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Background
A common surgical procedure for treatment of primary varicose veins is ligation and stripping of the great saphenous vein (GSV). After GSV stripping, the prescription of compression stockings is for 3–6 weeks to reduce hemorrhage, edema, and pain in standard practice. However, patients frequently report difficulty in applying the compression stockings and discomfort during warm weather.

Aims
We conducted a systematic review and meta-analysis of randomized controlled trials to evaluate the optimal duration of compression therapy after surgery for varicose veins. Then we applied the results clinically to patients and evaluate their outcomes.

Methods
Outcomes of short-duration (3–10 d) and long-duration (3–6 wk) compression therapy after GSV stripping and phlebectomies were evaluated.

Results
We observed non-significant differences in postoperative pain scores between the long-duration and short-duration groups, with a weighted mean difference of -0.03 (95% confidence interval (CI): -0.53 to 0.47) at 4 weeks, and -0.01 (95% CI: -0.31 to 0.33) at 6 weeks, postoperatively. We also observed non-significant differences in the incidences of postoperative complications and changes in leg volume 4 weeks postoperatively between the groups. According to the above results, we applied 1-wk compression therapy to 35 patients following varicose vein surgery between Jan. 2012 and March 2013, no hemorrhage was found, and the intensity of pain was satisfied postoperatively.

Conclusion
Meta-analyses synthesize evidence on the effects of interventions and support evidence-based practice. Our study indicated that there are no benefits to long-term compression therapy after varicose vein surgery of the GSV regarding postoperative pain, leg volume, incidence of complications, and duration of absenteeism from work. We therefore recommend the prescription of short-duration compression after varicose vein surgery in routine practice.