

Graduated compression stockings do not reduce the risk of deep vein thrombosis in neurological patients immobilized after stroke

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In patients undergoing surgery, graduated compression stocking (GCS) have been shown in small randomized trials to reduce the risk of thromboembolic disease (deep vein thrombosis, DVT and pulmonary embolism, PE). Although no randomized trial assessed the efficacy in preventing DVT or PE in neurological patients suffering from stroke, current guidelines recommend their use by extrapolation of results from surgical patients.

The CLOTS trial randomized 2156 patients immobilized after stroke to receive GCS or no GCS for DVT prophylaxis. Incidence of femoral or popliteal DVT (the primary outcome) was

assessed at 1 week and 1 month by compression Doppler echography. There was no difference in the incidence of primary outcome in the GCS group versus no GCS group (10.0 % vs. 10.5%, $p = \text{NS}$). However, adverse reactions (skin breaks, ulcers, blisters, and skin necrosis) were more frequent in the GCS group compared with no GCS (5% vs 1%; odds ratio 4.18, 95% CI 2.40-7.27).

In conclusion, the use of GCS does not reduce the risk of DVT in patients immobilized after stroke but increases the risk of skin damage. The authors concluded that the current guidelines on DVT and PE prevention after stroke should be changed. ▣

Comment on the paper:

The CLOTS Trials Collaboration – Effectiveness of thigh-length graduated compression stocking to reduce the risk of deep vein thrombosis after stroke (CLOTS trial 1): a multicenter, randomized controlled trial. *Lancet* 2009, doi: 10.1016/S0140-6736(09)60941-7 [Epub ahead of print]