NEWS in Brief

GRADUATED COMPRESSION STOCKINGS MAY NOT ONLY FAIL TO PREVENT DEEP VEIN THROMBOSIS AFTER STROKE, BUT MAY ALSO DAMAGE THE SKIN

According to researchers from the University of Edinburgh, the American Heart Association and American Stroke Association recommend graduated compression stockings or intermittent pneumatic compression devices as an adjunct to anticoagulation, or instead of anticoagulation when contraindicated, to reduce deep vein thrombosis (DVT) risk in stroke patients. This is based on small studies and meta-analyses. However, the researchers said that the results from the first large trial of compression stockings after stroke should change guidelines for treatment.

According to a study published in the Lancet, thigh-length compression stockings showed a non-significant 0.5% absolute decrease (95% CI 1.9% to 2.9%) in deep vein thrombosis (DVT) in a post-stroke population.

The randomised, controlled CLOTS 1 (Clots in Legs or Stockings after Stroke) study also showed a 4 time increase in skin ulcers and necrosis among stocking wearers, and a non-significant increase in lower-limb ischemia, compared with those who did not wear compression stockings.

The study included 2,518 patients hospitalised within one week of an acute stroke and who were immobile. The patients were randomised to routine care with or without thigh-length graduated compression stockings.

The study showed no important differences in any DVT rate between groups as follows – asymptomatic DVT OR 1.01 (95% CI 0.74 to 1.36); symptomatic DVT OR 0.84 stockings versus none (95% CI 0.53 to 1.31); confirmed pulmonary embolism OR 0.65 (95% CI 0.32 to 1.31).

Graduated compression stockings showed a significant increase in skin breaks, ulcers, blisters, and skin necrosis (5% versus 1%, OR 4.18, 95% CI 2.40 to 7.27). There was also a strong trend for increased lower limb ischemia and amputation (OR 3.53, 95% CI 0.73 to 17.03).

There was no benefit in patient sub-groups that might have been expected to get the most benefit from graduated compression stockings – for example, those treated early, those with leg weakness, and those not given concomitant anticoagulation. Although compression stockings have been shown effective in surgical patients, those with stroke differ in that they can be treated only after becoming immobile.

Another study from the CLOTS research group is ongoing to test the effectiveness of intermittent pneumatic devices.

Source: CLOTS Trials Collaboration. Effectiveness of thigh-length graduated compression stockings to reduce the risk of deep vein thrombosis after stroke (CLOTS trial 1): a multi-centre, randomised controlled trial. Lancet 2009; DOI: 10.1016/S0140-6736(09)60941-7.

NO CLEAR NET VALUE WITH LONG-TERM, LOW-DOSE ASPIRIN FOR PRIMARY PREVENTION OF CARDIOVASCULAR EVENTS IN APPARENTLY HEALTHY ADULTS

In apparently healthy adults, aspirin reduced composite myocardial infarction (MI), stroke, and vascular death rates to 0.51% per year compared with 0.57% among controls (P = 0.0001). This was a relative reduction of 12%. However, the bleeding rate in major gastro-intestinal and extra-cranial sites rose from 0.07% per year among controls to 0.10% among those receiving aspirin for primary prevention (P < 0.0001). The bleeding risk rose along with cardiovascular risk level. This was the finding of a meta-analysis of the Antithrombotic Trialists' Collaboration based in Radcliffe Infirmary, Oxford.

The benefit of aspirin use was a major coronary event risk reduction of 23% in non-fatal MI (0.18% with aspirin versus 0.23% for controls per year, P < 0.0001).

The number needed to treat for one year to prevent one non-fatal MI was 2,000. But there was no clear reduction in mortality from coronary heart disease (0.11% versus 0.12% per year, P = 0.5) or overall mortality (relative risk 0.95, p = 0.1) with long-term, low-dose aspirin use.

Primary prevention with aspirin could be expected to prevent 5 non-fatal MI, but cause 3 extra gastro-intestinal bleeds and 1 extra intracranial hemorrhage per 10,000 people treated per year. SMA

Source: Antithrombotic Trialists' Collaboration. Aspirin in the primary and secondary prevention of vascular disease: collaborative meta-analysis of individual participant data from randomised trials. Lancet 2009; 373: 1849-60.