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Review: Extended out-of-hospital prophylaxis with heparin prevents deep venous thrombosis in elective hip arthroplasty

A meta-analysis was conducted to review studies of the efficacy of extended out-of-hospital prophylaxis with low molecular weight heparin (LMWH) in patients who had received total hip replacement.¹ The question asked was: Is it more effective than placebo for reducing venous thromboembolism (VTE)?

Studies were selected if they were randomised controlled trials (RCTs) comparing extended out-of-hospital prophylaxis consisting of LMWH with placebo, patients had had elective hip arthroplasty, the presence or absence of all episodes of deep venous thrombosis (DVT) and proximal venous thrombosis were objectively documented by using bilateral ascending contrast venography, and objective methods were used to assess bleeding complications.

The main outcomes included all episodes of DVT, proximal venous thrombosis, symptomatic DVT and pulmonary embolism, and major bleeding complications.

Results

Six RCTs (1 953 patients) met the selection criteria. LMWH preparations assessed were enoxaparin (3 RCTs) and dalteparin (3 RCTs). The rates of all episodes of DVT, proximal DVT, and symptomatic VTE were lower in the LMWH group than in the placebo group (all *p* values < 0.05). Major bleeding occurred in 1 of 826 patients in the placebo group.

Conclusion

In patients who have received total hip replacement, extended out-of-hospital prophylaxis with LMWH is more effective than placebo for reducing VTE.

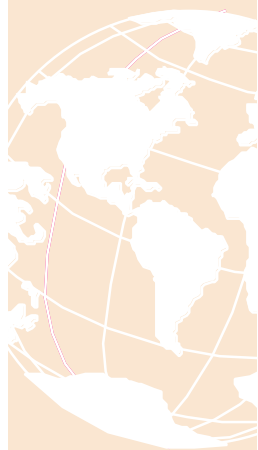
Commenting on this meta-analysis, Martin O'Donnell and Jack Hirsh² of the McMaster University, Hamilton, Ontario, Canada say 'The review by Hull and colleagues is the third meta-analysis of RCTs examining the risks and benefits of extending the duration of therapy with LMWH to 4-6 weeks. Unlike the previous meta-analyses, it focuses exclusively on elective hip arthroplasty and only includes RCTs in which mandatory venography was done at the end of the study period. Therefore it is more likely to show the efficacy of extended prophylaxis in reducing the incidence of asymptomatic DVT diagnosed by venography. Extended prophylaxis seems to be safe, because no reported cases of major bleeding occurred in the treatment group.

Conclusions about reducing the incidence of symptomatic VTE are less clear-cut because assurance was not given in 5 of 6 RCTs included in the review that clinical assessment was blinded to venographic outcome. We agree with the authors' conclusions that 'extended out-of-hospital prophylaxis with LMWH should be considered in patients undergoing elective hip replacement' and that 'further research is warranted to determine whether thromboprophylaxis should be extended to all patients undergoing surgery or to selected high-risk patients only'. We believe that further research on extended prophylaxis should include evaluating oral agents (both anticoagulants and oral antiplatelet drugs) that do not require laboratory monitoring.'

1. Hull RD, Pineo GF, Stein PD, *et al.* *Ann Intern Med* 2001; **135**: 858-869.
2. *ACP J Club* 2002; **137**: 11.

Psychosocial care of mothers after still-birth: is 'good-practice' good?

Most maternity units have good-practice protocols, advising that after stillbirth parents should be encouraged to see and hold their dead infant. A study was conducted to assess whether adherence to these protocols is associated with measurably beneficial



effects on the psychological health of mother and next-born child.

Women in the pregnancy after stillbirth ($N = 65$) were enrolled, and matched controls were enrolled for 60 of them. Outcome measures included depression, anxiety, and post-traumatic stress disorder (PTSD) in pregnancy and 1 year after the next birth, and disorganised attachment behaviour in the next-born infant. Comparison variables included seeing and holding the stillborn infant, having a funeral, and keeping mementoes.

The results showed that behaviours promoting contact with the stillborn infant were associated with worse outcome. Women who had held their stillborn infant were more depressed than those who only saw the infant, while those who did not see the infant were least likely to be depressed (13/33, 39% v. 3/14, 21%, v. 1/17, 6%; $p = 0.03$). Women who had seen their stillborn infant had greater anxiety and worse symptoms of PTSD than those who had not, and their next-born infants were more likely to show disorganised attachment behaviour (18/43, 42% v. 1/12, 8%). Having a funeral and keeping mementoes were not associated with further adverse outcomes, but small numbers limited the interpretation.

The authors conclude that their findings do not support good-practice guidelines, which state that failure to see and hold the dead child could have adverse effects on parents' mourning.

(Hughes P *et al. Lancet* 2002; **360**: 114-118.)

Effects of exercise and weight loss on blood pressure during daily life

Weight loss and exercise have been prescribed to hypertensive patients, as it was suggested that control of these two lifestyle elements would lower blood pressure (BP). A study was recently reported which aimed to investigate the effects of exercise training and weight loss on BP associated with physical activity and emotional stress during daily life.

One hundred and twelve participants with unmedicated, high, normal or stage 1 - stage 2 hypertension were randomised to one of three groups: a combined exercise and behavioural weight management (WM) group, an exercise-only (EX) group or a wait list control (CON) group. BP was assessed in a clinic and

during 15 hours of daytime ambulatory BP monitoring at baseline and after 6 months of treatment.

Increased levels of physical activity and emotional distress measured during daily life were associated with increases in systolic blood pressure (SBP), diastolic blood pressure (DBP), heart rate (HR), and rate pressure product (RPP).

The results of the study showed that after treatment, the WM group had significantly lower DBP, HR, and RPP response during both high and low levels of physical activity and emotional distress compared with the CON group. The EX group had similar BP levels as the WM group, although the EX group had significantly lower BP than the CON group during low but not during high levels of physical activity and emotional distress.

These findings indicate that exercise, especially when combined with weight loss, reduces BP levels at rest and in situations that typically elevate BP, such as intense physical activity and emotional distress.

(Steffen PR *et al. Med Sci Sports Exerc* 2001; **33**: 1635-1640.)

SINGLE SUTURE

Spouses in danger

In a 1998 study in the UK it was shown that the spouses of people with hypertension were also at risk of developing it. Many other diseases have been studied from this viewpoint, including ischaemic heart disease, diabetes, peptic ulcer disease, asthma and stroke. A recent report in the *BMJ* (2002; **325**: 636-638) indicates that partners of people with specific diseases are at increased risk of the disease themselves — at least a 70% increased risk for asthma, depression and peptic ulcer disease. This finding implicates shared environmental causes in some diseases, in addition to genetic or distant exposure, or shared behaviours with regard to seeking health care.