Clinical Practice Committee

Once Daily Low Molecular Weight Heparin
For the Treatment of Deep Venous Thrombosis

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Sources:

Clinical Question:
In patients with deep venous thrombosis (DVT), does once daily low molecular weight heparin (LMWH) result in similar efficacy and adverse events as twice daily therapy?

Bottom Line:
Once daily LMWH is as effective as twice daily therapy in preventing recurrent thromboembolism and does not result in higher mortality or major bleeding.

Study Design
Systematic review of the literature.

Synopsis:
LMWH has largely replaced continuous intravenous unfractionated heparin for the treatment of DVT. This has allowed for effective outpatient treatment that previously resulted in a five to seven day hospitalization. Once daily LMWH is more convenient and less costly for patients compared with twice daily therapy.

The above Cochrane Systematic review of published studies identified five adequate quality, randomized trials involving 1508 patients. The odds ratio of developing a recurrent thromboembolic event with once daily versus twice daily LMWH was 0.82, which was not statistically significant (95% confidence interval 0.49-1.39). The two studies that evaluated patients for thrombus extension found no difference between the regimens. Hemorrhagic complications occurred in 2.2% of the patients treated once daily and 2.9% in those treated twice daily, also not statistically significant. Only one study included patients with pulmonary embolism and thus similar conclusions cannot be drawn for this patient population. A meta-analysis published in 2001 compared these two dosing strategies as well and reached similar conclusions.

Caution to Reader: While the odds ratio for a recurrent thromboembolic event favors the conclusion of equivalence between the two treatment strategies, the confidence interval is quite wide, 0.49-1.39. Thus, there is a possibility that the risk of a recurrent thromboembolic event is higher with the once daily treatment regimen. Larger patient numbers in future studies will be necessary to narrow the confidence interval.