

The treatment of COVID-19 associated venous thromboembolism (VTE); an evidence review investigating the efficacy of different low-molecular weight heparin doses for VTE prophylaxis in COVID-19 patients

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Venous thromboembolism (VTE) is a serious complication of COVID-19 infection and contributes significantly to mortality in these patients. VTE prophylaxis is an intervention aimed at preventing serious complications of COVID-19 by reducing the risk of hospital associated VTE in medically and critically ill patients. The primary research question used for our guideline and systematic reviews search was: 'What is the efficacy of different anticoagulant doses in reducing VTE incidence, mortality or ITU admission in COVID-19 inpatients?' NICE Evidence, EMBASE and MEDLINE were used to search for guidelines using the search terms 'COVID-19', 'Anticoagulation' and 'Venous thromboembolism'. EMBASE, MEDLINE and the Cochrane Library were used to search for 'Systematic reviews' using identical search terms. EMBASE, MEDLINE and the Cochrane Library were also used to search for primary research studies. 'COVID-19', 'LMWH' and 'Venous thromboembolism' were search terms used. The single SIGN guidelines found recommended standard thromboprophylaxis dose of LMWH for hospital in-patients with critical or severe COVID-19 disease. Systematic reviews failed to produce any strong associations between increasing anticoagulant dose and decreased mortality. Two relevant primary research studies were included in the review, both of which had inconclusive results, with one highlighting the benefits of increased dose are outweighed by the increased risk of bleeding. This review made tentatively supported suggestions for use of a standard (40 mg every 24 hours) or increased dose (>40 mg every 24 hours) of LMWH for use in VTE prophylaxis in patients with COVID-19.

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