VTE Prophylaxis in

Critically III Adults

LMWH VS PLACEBO



Among 223
mechanically
ventilated patients, the
incidence of DVT was
15.5% in the
nadroparin group,
while it was 28.2% in
the placebo group (p =
0.045).

LMWH VS UFH



In 3764 critically ill patients, dalteparin was found to be associated with a lower rate of pulmonary embolism (PE) compared to unfractionated heparin (UFH) (1% versus 2%; hazard ratio 0.5). However, dalteparin did not show any significant impact on DVT, bleeding, or mortality outcomes compared to UFH

PROTECT TRIAL

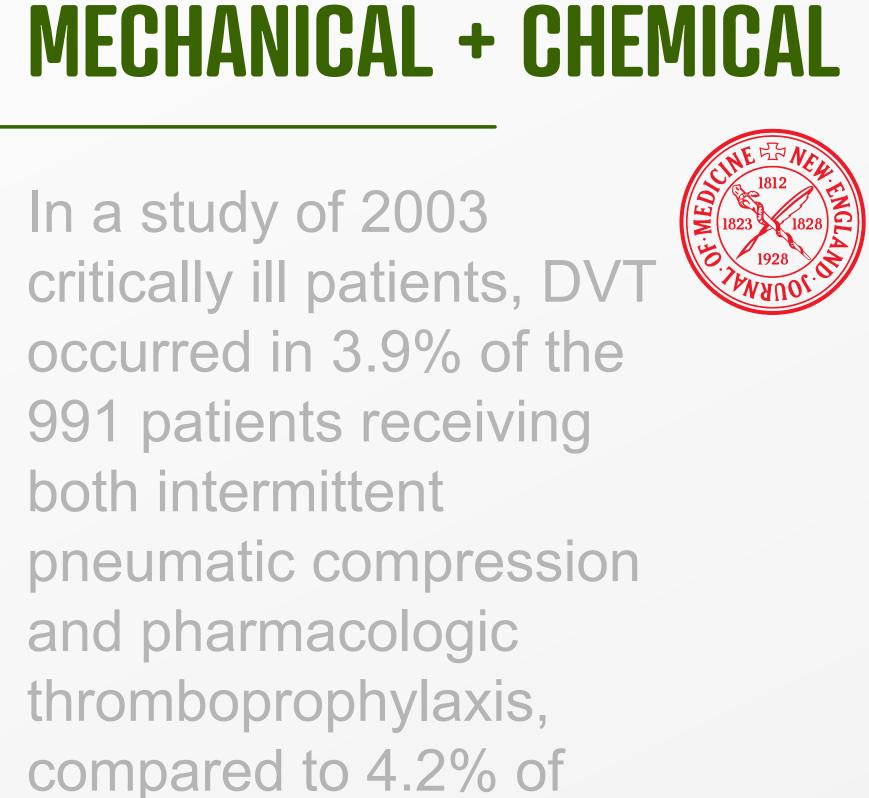
MECHANICAL VS CHEMICAL

A retrospective study



of nonsurgical patients on mechanical ventilation, involving 329 patients in the chemical prophylaxis (CP) group and 419 patients in the mechanical prophylaxis (MP) group, the incidence of thromboembolic events (VTEs) was 0.3% in the CP group compared to 3.1% in the MP group (odds ratio of 9.9). The mortality rate was 34.3% in the CP group and 50.6% in the MP group.

GASPARD ET AL.



PREVENT TRIAL

the 1012 patients

thromboprophylaxis

Furthermore, no

(10.4% vs 9.4%).

alone (p-value=0.74).

difference in VTE rates

between the two groups

receiving pharmacologic

META-ANALYSIS

13 randomized trials that



enrolled a total of 9619 critically ill patients reported that LMW heparin reduced the incidence of all DVT (OR 0.59, 95% CI 0.33-0.90; high certainty) when compared with control treatment (a composite of no prophylaxis, placebo, or compression stockings only). LMW heparin appeared to be more effective than UFH (OR 0.72, 95% CI 0.46-0.98; moderate certainty), and mechanical methods of thromboprophylaxis (eg, intermittent compressive devices) were least effective (OR 0.85, 95% CI 0.50-1.50; low certainty). The effect of combination therapy was unclear.

FERNANDO ET AL.

CADE ET AL. FRAISSE ET AL.

2000

2011

2015

2019

2022

2012 ACCP Guidelines

HEPARIN VS. PLACEBO

Among 119 critically ill

patients, the incidence

subcutaneous heparin

at a dose of 5000 units

group had an incidence

(DVT) was 13% in

those receiving

every 12 hours,

whereas the control

of 29% (P < 0.05).

1982

of deep vein thrombosis

For critically ill patients, we suggest using LMWH or low-dose unfractionated heparin (LDUH) thromboprophylaxis (Grade 2C). For critically ill patients who are bleeding or are at high risk for major bleeding, we suggest mechanical thromboprophylaxis with graduated compression stockings and/or intermittent pneumatic compression at least until the bleeding risk decreases (Grade 2C).

Dosing

Enoxaparin 40 mg subcutaneously once daily (creatinine clearance >30 mL/minute and assuming no extremes in body weight)

UFH is 5000 units subcutaneously twice or three times daily (5000 to 7500 units three times daily in obese patients)