

COVID-19 Complicated by Venous Thromboembolism (VTE)

Latest VTE risk in COVID-19 is reported as 20% in the highly immobile ICU patients, with an underlying bleed risk also reported as significantly greater in these patients¹.

The problem

A retrospective study of 138 critically ill COVID-19 patients has identified that severe hypoxemic respiratory failure from COVID-19 brings with it a high risk of venous thromboembolism (VTE) and a high bleed risk – and calls for more effective in-hospital VTE prevention strategies.

The data shows that compared to non-critically ill patients, critically ill COVID-19 patients were significantly more immobile ($p < 0.001$) and had significant underlying bleed risks ($p < 0.01$, based on IMPROVE score). These DVT risk factors (based on PADUA score) contributed to a significantly greater DVT incidence rate in critically ill COVID-19 patient ($p < 0.01$).



The solution

The geko™ device, recommended by NICE² and cleared by the FDA, reduces VTE risk (blood clots) in patients where current interventions may be contraindicated, such as pharmacological prophylaxis due to bleed risk, or considered impractical or inaccessible, such as pneumatic compression devices in over-stretched critical care units and field hospitals.

Easy to use, the geko™ is a battery powered, disposable, neuromuscular electro-stimulation device designed to increase blood flow in the deep veins of the leg.

The geko™ device gently stimulates the common peroneal nerve activating the calf and foot muscle pumps resulting in increased blood flow, at rate equal to 60% of walking, without a patient having to move³.



- Clinically proven DVT prevention
- Do not have to sterilize after patient use
- Patient friendly, no pumps or hoses
- Easy to use and disposable

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References

1. Jin-fu Xu et al. Risk assessment of venous thromboembolism and bleeding in COVID-19 patients, Respiratory Research, BMS. 24th March 2020. This paper is a preliminary report that has not undergone peer review.
2. NICE Guidance (MTG19). The geko™ device for reducing the risk of venous thromboembolism. Issued: June 2014.
3. Tucker A, Maass A, Bain D, Chen LH, Azzam M, Dawson H, et al. Augmentation of venous, arterial and microvascular blood supply in the leg by isometric neuromuscular stimulation via the peroneal nerve. The International journal of angiology: official publication of the International College of Angiology, Inc. 2010 Spring;19(1): e31-7.