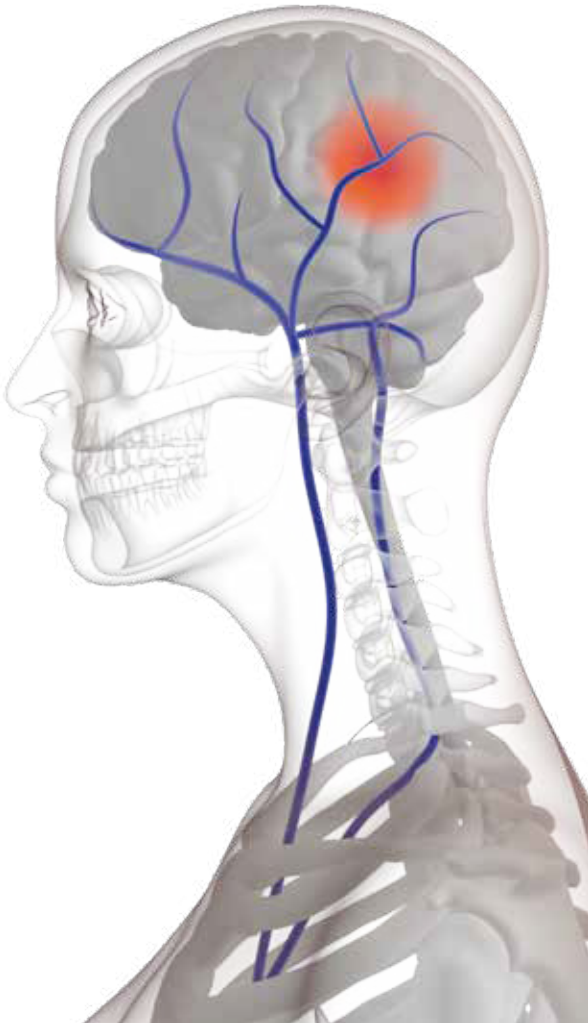
geko™
circulation support

VTE Prophylaxis

Serving an unmet need in high-risk acute stroke patients



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The challenges of VTE prophylaxis in high risk acute stroke patients

Anticoagulation:

- Whitely[1] showed that anticoagulants should not be used routinely or in higher risk acute stroke patients as it is not possible to predict which sub group may be at sufficiently high risk of VTE to outweigh the associated risk of haemorrhagic complications.
- Geegange[2] showed that the risk of symptomatic intracerebral haemorrhage outweighs the benefit from VTE prevention with routine anticoagulation.

Intermittent Pneumatic Compression (IPC):

- It is for these reasons that in many healthcare systems IPC, also known as SCD (sequential compression devices), is employed as the primary VTE prevention strategy for high risk immobile acute stroke patients.
- However, IPC is contraindicated in patients with peripheral vascular disease, dermatitis or leg ulcers. Caution should also be shown if a patient reports leg tingling, numbness or pain whilst some patients do not tolerate IPC.[3,4]

IPC reduces the risk of VTE by reducing stasis in the deep veins but can be contraindicated or not tolerated in acute stroke patients creating an unmet need

The geko™ device: A new solution to IPC contraindication and intolerance

The geko™ device is recommended by NICE to reduce VTE risk when IPC is contraindicated or cannot be tolerated and acts by preventing stasis in the deep veins of the calf.[5]

Easy to use the geko™ is a battery powered, disposable, neuromuscular electrostimulation 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[6].

60%

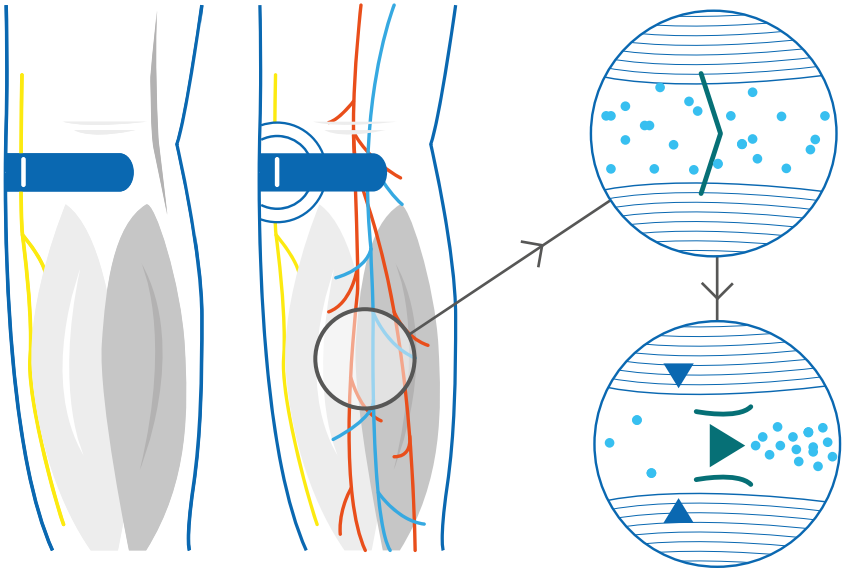
The increase in blood flow is equal to 60%[6] of walking without a patient having to move.

Zero

No wires or leads. Small, light and comfortable to wear. Silent in operation.

10g

Weighs just 10g. Quick and easy to fit.



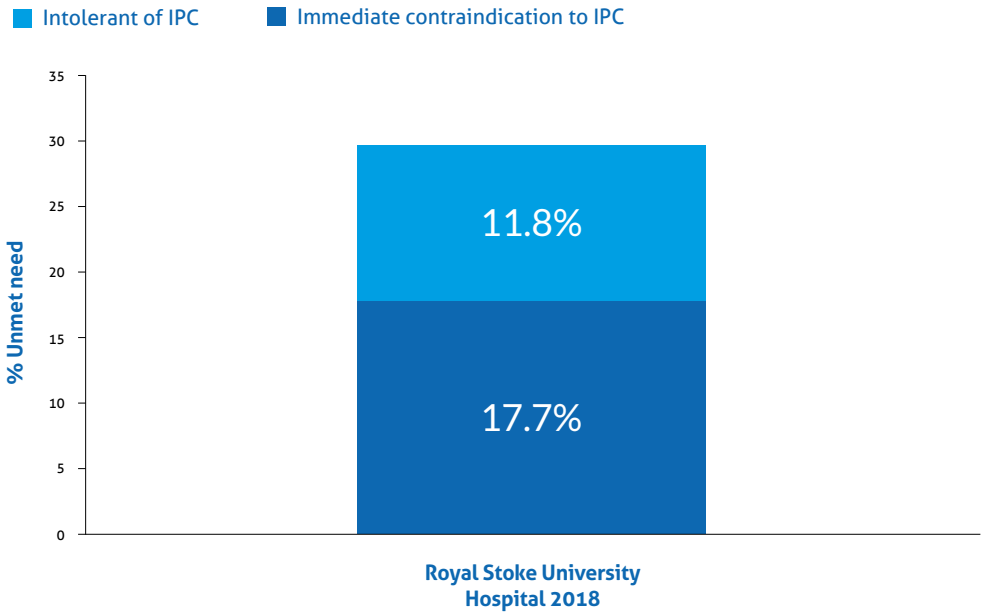
IPC contraindication in acute stroke: The current clinical burden

The University Hospital of North Midlands NHS Trust has quantified the real world contraindication and tolerance to IPC in acute stroke through a clinical audit.

This prospective audit reviewed a total of 1000 admitted stroke patients (Haemorrhagic and Ischemic) where patients had their contraindication to IPC reviewed at risk assessment and their IPC tolerance was maximised by mandatory patient checks at regular intervals.

This audit showed that 688 (68.8%) of admitted stroke patients were prescribed IPC but 203 (29.5%) of these patients were not suitable or were unable to tolerate this intervention, a significant unmet need.

Patients requiring an alternative anti-stasis intervention



The geko™ device in acute stroke: Safe and well tolerated

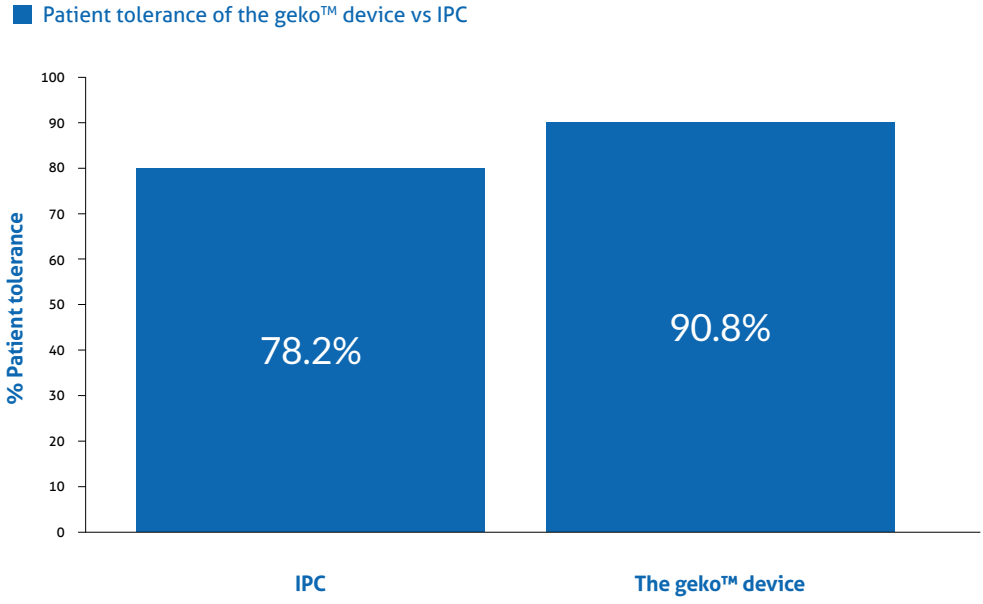
As recommended by NICE, the geko™ device is used an alternative anti-stasis intervention when IPC is contraindicated or cannot be tolerated.

The safety and tolerance of the 203 patients prescribed the geko™ was also reviewed during the audit. No adverse events or skin irritation were reported.

Over 90% of patients tolerated the geko™ device, which was favourable when compared to IPC. The average need requirement of the geko™ was 9 days per patient.

Were it not for the intervention of the geko™ device, these patients would have had no other VTE prophylaxis strategy available to them.

Patient tolerance of VTE mechanical prophylaxis



The geko™ device is efficacious in acute stroke:

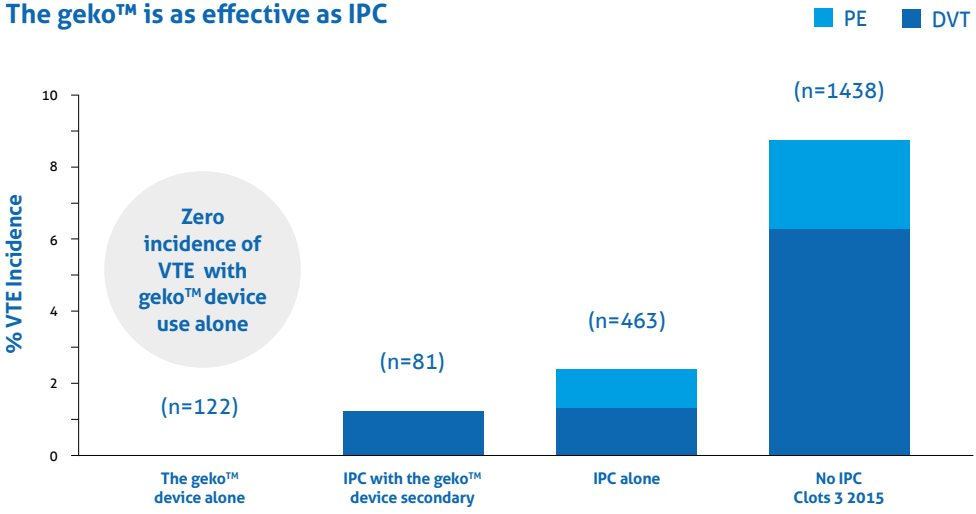
Following the audit The Royal Stoke University Hospital has amended the VTE prophylaxis pathway for high risk immobile acute stroke patients.

This change in clinical practice means that the geko™ device is now used alongside IPC to provide a continuous anti-stasis intervention when IPC cannot be prescribed. The outcome is a very low rate of VTE.

The audit allowed the 90 day VTE incidence follow-up for the 666 patients who were prescribed IPC or the geko™ to be reviewed. The VTE rate associated with IPC was 2.4% whilst no VTE events were recorded in patients prescribed the geko™ device. The data below shows the geko is as effective as IPC in reducing the risk of VTE in immobile acute stroke patients

The graph also positions the potential VTE risk of no IPC intervention in the same population[7]. This risk highlights the important role of the geko™ device in this population.

The geko™ is as effective as IPC



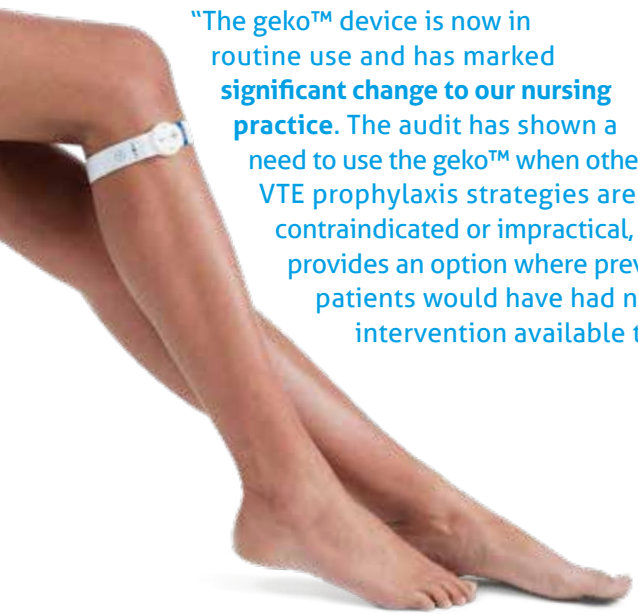
Continuous mechanical compression (+ standard measures)
Enhanced pathway, Royal Stoke University Hospital audit 2018

The VTE consequence of no mechanical intervention (+ standard measures)

The geko™ device is cost saving in acute stroke:

The cost consequence of no mechanical intervention in immobilised stroke patients:

The CLOTS 3 study[7] reported VTE incidence without mechanical intervention (but with standard intervention of aspirin and early mobilisation where appropriate). This shows the VTE incidence in immobile stroke patients without an anti-stasis intervention could be as high as 8.7%. Accordingly, the use of the geko™ device could save up to £237 per patient (assuming 9 days of geko™ treatment).



"The geko™ device is now in routine use and has marked **significant change to our nursing practice**. The audit has shown a need to use the geko™ when other VTE prophylaxis strategies are contraindicated or impractical, and provides an option where previously patients would have had no other intervention available to them."

Dr. Indira Natarajan FRCP (UK)
Consultant Stroke Physician
Clinical Director Neurosciences
The Royal Stoke University Hospital

Available on NHS supply chain: EGD10078

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