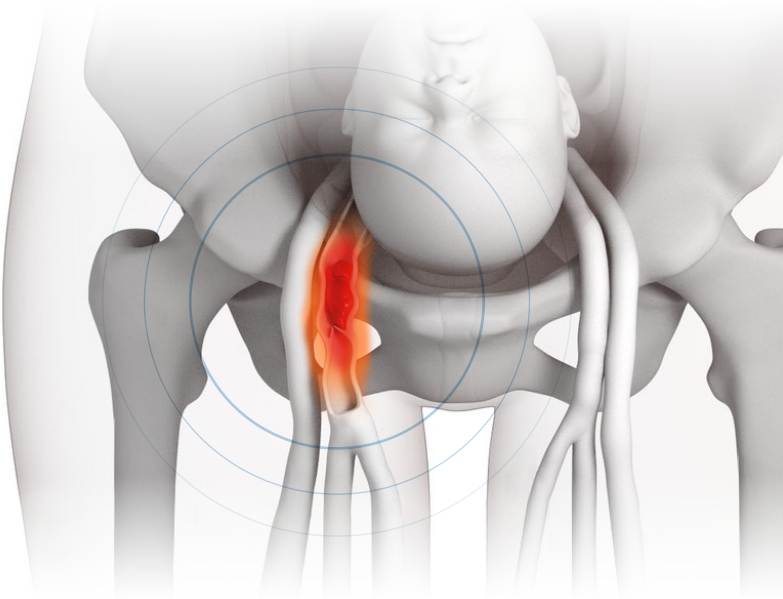
geko®
circulation support

VTE prophylaxis

Preventative care for obstetric related venous thromboembolism (VTE)



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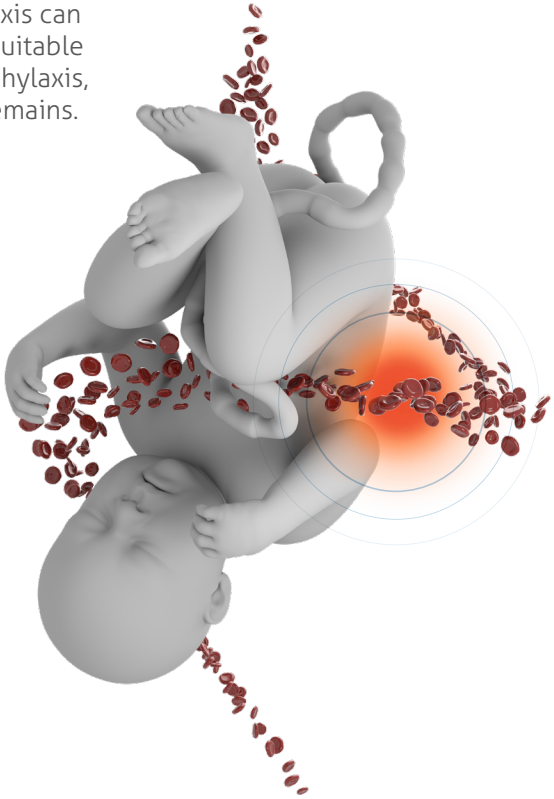
Pregnancy carries a higher risk of blood clots

Pulmonary embolism (PE) is the leading cause of maternal death in the developed world[1]. Patients are 5 times more likely to develop deep vein thrombosis (DVT) during pregnancy than when not pregnant[2]. The UK incidence of venous thromboembolism (VTE) in pregnancy and the puerperium is 1–2 episodes per 1,000 patients[3] and accounts for 10 per cent of all maternal deaths in the United States.

NICE and the Royal College of Obstetricians and Gynaecologists (RCOG) recommends the use of low molecular weight heparin (LMWH) and/or mechanical compression in high-risk patients during childbirth. In some circumstances, however, the above options for prophylaxis can be contraindicated. In the absence of a suitable alternative, patients receive no VTE prophylaxis, for these patients, the fatal risk of VTE remains.



Serving an unmet need

There are certain situations when pharmacological methods are contraindicated and therefore cannot be administered due to high risk of bleeding or the impending need for delivery.

These include:

- Post-partum haemorrhage (PPH)
- Low platelets
- Severe pre-eclampsia
- Intrapartum

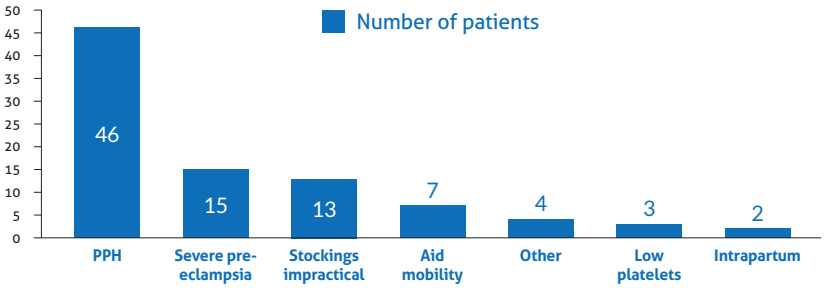
The NICE medical technologies guidance (MTG19) recommends offering combined venous thromboembolism prophylaxis with mechanical and pharmacological prophylaxis for patients who are pregnant or who have given birth during the previous 6 weeks who are having surgery, including caesarean section[4].

The geko® device in routine use of obstetrics

A prospective observational study was carried out at Barnsley Hospital NHS Foundation Trust with the aim of determining whether the use of the geko device would prove effective and satisfactory for patients when LMWH and/or traditional mechanical compression could not be used.

90 patients were recruited over a period of 17 months[5] all of whom required the geko device at some stage of their labour.

Table 1 – High-risk groups which required the geko device during childbirth



- The study identified that post-partum haemorrhage (PPH) was the largest high-risk group amongst those requiring alternative thrombo-prophylaxis.
- The study showed that there was a need for an alternative VTE prophylactic intervention in high-risk patients.
- Without the geko device, these patients would have had no VTE prophylaxis at all.
- The geko device studied was safe and well tolerated.
- There was favourable user satisfaction with the geko device and the patients were more mobile, thereby reducing the VTE risk further.
- The geko device was used for maximum of 36 hours.

The geko® device is cost saving

In patients at high risk of venous thromboembolism who would otherwise receive no prophylaxis, using the geko device is estimated to be cost saving.

NICE guidance MTG19 estimated that the cost saving when using the geko device in patients at high risk of venous thromboembolism compared with no prophylaxis was £337[6] per patient.

About the geko® device

The geko device is recommended by NICE to reduce VTE risk when other forms of prophylaxis are contraindicated or cannot be tolerated and acts by preventing stasis in the deep veins of the calf[7].

Easy to use, the geko device 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[8].

References

1. Paila Devis, Grace Knuttinen, DVT in pregnancy: incidence and endovascular management, review article, cardiovascular diagnosis and therapy, 2017;7 (suppl 3): S309-S319.
2. Mrik PE, Plante LA Venous Thromboembolic disease in pregnancy. N Engl J Med 2008; 359:2025.
3. RCOG guidelines - https://www.rcog.org.uk/globalassets/documents/guidelines/gtg-37a.pdf.
4. NICE MTG19 - nice.org.uk/guidance/mtg19.
5. Data on file, Barnsley Hospital, 2019.
6. Independent economic analysis by Mtech Access Ltd, April 2017.
7. A.Nicolaides, M Griffin, Measurement of blood flow in the deep veins of the lower limb using the geko™ neuromuscular electro-stimulation device. Journal of International Angiology August 2016-04.
8. 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.

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