

The use of the geko™ device and the activation of the foot and calf pumps for prevention of venous thromboembolism in patients with acute stroke.

J. Williams¹, C. Roffe¹, I. Natarajan¹, C. Moss¹, C. Lambert¹, L. Richards².

1. University Hospital of North Midland NHS Trust, Acute Stroke Unit, Stoke on Trent, United Kingdom.

2. Undergraduate School of Medicine- Keele University, Stoke on Trent, United Kingdom.

Background and Aims

Venous Thrombo Embolism (VTE) prophylaxis using Intermittent Pneumatic Compression devices (IPC) is not possible in all stroke patients, we changed our pathway to include the Neuromuscular Electrical Stimulation geko™ device as an alternative for patients with acute stroke who had contradictions/not tolerate IPC. The aim of this audit was to assess the acceptability of this new practice for patients and staff and its impact on VTE.

Method

The audit included 455 patients admitted to the Acute Stroke Unit at Royal Stoke University Hospital (RSUH).

All stroke patients who are immobile are given VTE prophylaxis, unless they are palliative, refusing the intervention, or fully anticoagulated. Every patient is reviewed daily on a nurse-led VTE ward round to monitor compliance with VTE prophylaxis.

Results

In total 6/455 (1.3%) patients developed symptomatic VTE (3 DVTs and 3 PEs) within 90 days. Of these, 4 patients (1.6%) were prescribed IPC, 1 patient (1.3%) was prescribed the geko™ device as a secondary intervention and 1 patient (1.5%) patient was prescribed anticoagulation. There was no DVT or PE in patients treated with the geko™ device as the primary VTE prophylaxis.

Conclusion

This audit shows a low incidence (1.3%) of symptomatic VTE in a high-risk population of all immobile stroke patients during the audit period. The number of patients who were contraindicated to IPC or did not tolerate IPC and were treated with the geko™ device in this project was 35.6%. Whilst limited, our data suggests that the geko™ device may be as effective as IPC in our patient cohort.