A retrospective service evaluation of the observed venous thromboembolism (VTE) incidence rate in below knee total contact casting for the management of active neuropathic foot disease

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SCAN ME

INTRODUCTION & BACKGROUND

. Total contact casting is gold-standard management of diabetic foot disease[1].

. VTE incidence rate is reported to be ~1-2 (0.2%) events per 1000 people annually[2] with anecdotal evidence in diabetic foot disease[3].

. Risk factors of VTE in casting include DM, HTN, obesity, CV disease, cancer, CKD and aged 35+ years[4].

. VTE risk in neuropathic populations may be reduced by weightbearing and calf pump activity,[5] and arteriovenous shunting[6].

Aim: To investigate the VTE (deep vein thrombosis or pulmonary embolism) incidence rate in patients who had total contact casting (TCC +/- Böhler walker) applied for the management of neuropathic foot disease, including foot ulceration and Charcot neuroarthropathy, either during the casting episode or 3-months post-casting.

STUDY OUTCOMES

. ***Outcome 1*** The reported incidence rate of VTE events during the casting episode or 3-months post-casting.

. ***Outcome 2*** The rate of VTE incidence confirmed on radiological imaging.

METHODOLOGY AND SELECTION

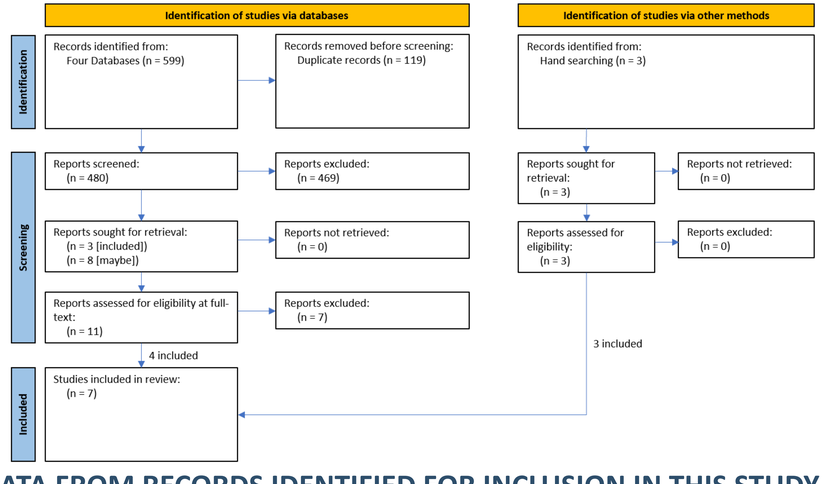
. ***Study design*** Retrospective service evaluation design (cohort study).

. ***Method*** Electronic patient records were reviewed for patients with TCC application for ulceration or Charcot foot recorded between 2016-2025.

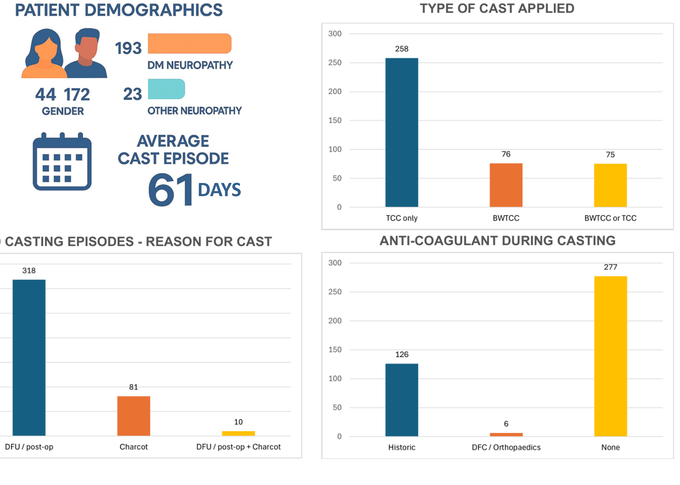
. ***Inclusion criteria*** Aged 18+ years old, record of neuropathy, record of TCC application for ulceration or Charcot neuroarthropathy.

. ***Data collected*** Gender, age, diabetes and neuropathy status, cast reason, cast type, length of cast episode, confounding risk factors, anti-coagulant status, VTE event reported, VTE confirmation on radiology imaging report.

LITERATURE REVIEW AND PRISMA CHART



DATA FROM RECORDS IDENTIFIED FOR INCLUSION IN THIS STUDY



RESULTS & CLINICAL INSIGHTS

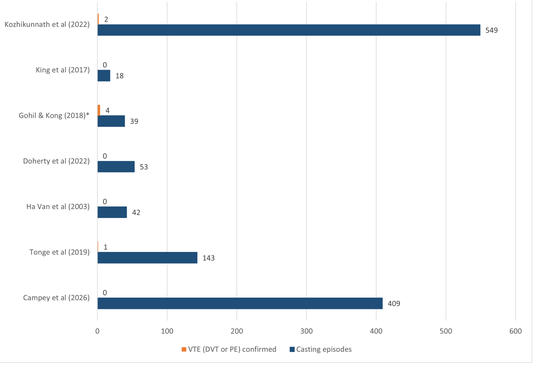
. ***Outcome 1***

Reported VTE events during cast episode or 3/12 post-cast; **n=10/409 (2.4%)**

. ***Outcome 2***

VTE event (DVT or PE) confirmed on imaging; **n=0/10 (0%)**

COMPARISON OF RESULTS TO OTHER LITERATURE



LIMITATIONS & DISCUSSION

. A retrospective study reviewing electronic records with a potential for under-reporting .

. Asymptomatic VTE events and VTE events in paper records may be missed.

. Calf thromboses may have gone undetected due to imaging protocols.

. VTE incidence rate in this study is comparable to the literature available.

. Routine thromboprophylaxis for all is not indicated by current evidence.

. All patients should be screened and managed for individual VTE risk factors.

. All patient should be educated on risk and symptoms with close monitoring.

. Further research is required into this subject area.

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