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DIRECT ORAL ANTI-COAGULANTS IN THE PREVENTION OF VENOUS THROMBOEMBOLISM FOLLOWING SURGERY FOR HIP FRACTURE IN THE ELDERLY

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Background: Direct Oral Anti-Coagulants (DOACs) decrease the risk of Venous Thromboembolism (VTE) without increasing the risk of bleeding in elective lower limb orthopedic surgery. However, the role of DOACs in preventing VTE following hip fracture surgery in the elderly remains unclear. This study aims to evaluate the efficacy and safety of DOACs in elderly patients undergoing surgery for hip fracture.

Methods: Single-center, retrospective, matched cohort study of patients receiving either a DOAC or Low Molecular Weight Heparin (LMWH) for VTE prophylaxis following hip fracture surgery.

Data obtained: Patient demographics, co-morbidities, fracture classification, time to surgery, procedure performed and length of stay.

Outcomes Assessed: Incidence of VTE, incidence of major haemorrhage and death within 30 days of surgery.

Results: A total of 108 patients (DOAC group = 54, LMWH group = 54) were included. The incidence of VTE was comparable between the DOAC and LMWH groups at 0% and 7.4% respectively (RR: 0.11, 95% CI: 0.01 to 2.02, p=0.14). Haemorrhage occurred in 7.4% of patients in the DOAC group and 5.6% of patients in the LMWH group (RR: 1.33, 95% CI: 0.31 to 5.68, p=0.70). Mortality from VTE was 0% in the DOAC group and 1.9% in the LMWH group (RR: 0.33, 95% CI: 0.01 to 8.01, p=0.49). Mortality from haemorrhage was 1.9% in both the DOAC and LMWH groups (RR: 1.00, 95% CI: 0.06 to 15.58, p=0.99).

Conclusion: This study demonstrates comparable efficacy and safety of DOACs with LMWH in the prevention of VTE following surgery for hip fracture in the elderly. This can be achieved with careful patient selection. Future studies are required to identify patients who stand to benefit the most from treatment.

BIOGRAPHY

En Lin Goh is a Trauma and Orthopaedics Academic Foundation Programme Trainee in University of Oxford, United Kingdom. He qualified his Distinctions from Imperial College, London with in Medical Sciences, Clinical Sciences and Clinical Practice. He got First Class Honours in Pharmacology in 2018. He has received 24 prizes and awards across various disciplines in basic science, pathology and clinical medicine throughout his medical training. His research interests include bone pharmacology, bone quality and joint diseases, in which he has published 24 peer-reviewed publications and delivered 31 presentations at national and international conferences. Currently he is a Foundation Educational Lead for the Oxford Foundation Programme.

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