B. CARDIOVASCULAR COMPLICATIONS IN DIALYSIS

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INTRODUCTION AND AIMS: Oral anticoagulation is associated with a >50% risk reduction for stroke in patients with preserved renal function and atrial fibrillation. However, although risk of stroke due to atrial fibrillation is markedly (>2-fold) increased in patients with end-stage renal disease, the safety and efficacy of prescribing warfarin in patients on chronic dialysis remains uncertain, particularly due to perceived increased risk of bleeding.

METHODS: Based on nationwide health care registers, all patients with end-stage renal disease and incident atrial fibrillation were identified in Denmark between 2002 and 2012. Patients with cerebral hemorrhage <4 weeks, gastrointestinal ulcer <3 months, incident cancer <6 months, prior stroke or bleeding and age <18 years were excluded. Based on multiple cause-specific Cox regression models, standardized one-year risks of stroke and major bleeding were calculated using g-formula to compare warfarin treatment with no treatment.

RESULTS: A total of 831 patients with end-stage renal disease and incident atrial fibrillation were identified between 2002 and 2012; only a minority initiated warfarin treatment. Absolute one-year risk of stroke was 1.7 (95% CI 0.1 - 8.9) per 100, and 6.1 (95% CI 4.2 - 8.0) per 100 in patients treated with warfarin and no treatment, respectively, and absolute one-year risk of major bleeding was 9.2 (95% CI 0.1 - 20.8) per 100, and 8.1 (95% CI 6.0 - 10.0) per 100, respectively (results shown in figure). As such, warfarin was associated with a reduced risk of stroke of 3.6 (95% CI 7.3 - 2.7) per 100 and an increased risk of bleeding of 1.1 (95% CI 7.8 - 11.3) per 100.

CONCLUSIONS: In a nationwide cohort study, initiation of warfarin in patients with end-stage renal disease and atrial fibrillation was associated with a 3.5% decrease in risk of stroke compared to a 1.1% increase in risk of bleeding. Although results remained underpowered for significance, warfarin was not observed to be associated with significant shift in harm-to-benefit ratio.