

Glucagon-Like Peptide-1 Receptor Agonists and the Risk of Stroke in Patients with Atrial Fibrillation and Type 2 Diabetes: A Danish Nationwide Cohort Study

Author: *Maria Pham¹

1. Hvidovre Hospital, Copenhagen, Denmark
*Correspondence to maria.pham1997@gmail.com

Disclosure: The author has declared no conflicts of interest.

Keywords: All-cause mortality, atrial fibrillation (AF), diabetes, glucagon-like peptide-1 receptor agonists (GLP-1 RA), stroke.

Citation: EMJ Cardiol. 2026;14[1]:53–54.
<https://doi.org/10.33590/emjcardiol/2PK1ZS6Y>

SUMMARY OF KEY RESEARCH FINDINGS

Atrial fibrillation (AF) and Type 2 diabetes (T2D) frequently coexist and are independently associated with an increased risk of stroke and adverse cardiovascular outcomes. Patients with both AF and T2D represent a clinically vulnerable population with an amplified risk of stroke, cardiovascular morbidity, and mortality. Although glucagon-like peptide-1 receptor agonists (GLP-1 RA) have demonstrated cardiovascular benefits in broader populations with T2D, evidence specifically addressing patients with both AF and T2D remains limited.

Using Danish nationwide registries, the author identified adults with AF and T2D between 2010–2023.¹ A total of 7,957 patients initiating GLP-1 RA treatment were matched 1:1 with 7,957 non-users selected from the corresponding risk sets according to age, sex, index year, and time since eligibility. The mean age was 70 years, and 67.7% of patients were male.

During follow-up, 642 strokes occurred: 219 among GLP-1 RA users and 423 among non-GLP-1 RA users. GLP-1 RA users were associated with a lower rate of stroke after multivariable adjustment (hazard ratio [HR]: 0.65; 95% CI: 0.59–0.77). The association was consistent across subgroups defined

by age group, AF duration, and previous stroke, with no significant interactions. GLP-1 RA users also had lower rates of all-cause mortality (adjusted HR: 0.69; 95% CI: 0.65–0.74) and first all-cause hospitalisation (adjusted HR: 0.79; 95% CI: 0.76–0.82).

WHAT CHALLENGE DOES THIS ADDRESS?

Patients with concomitant AF and T2D represent a particularly vulnerable population with a substantial burden of thromboembolic events, mortality, and recurrent hospitalisation. Stroke prevention in AF primarily relies on appropriate oral anticoagulation and management of modifiable cardiovascular risk factors. However, whether GLP-1 RA therapy provides additional protection in this specific population is uncertain.

This study addresses this evidence gap by examining outcomes associated with GLP-1 RA use in a large, unselected, nationwide cohort. The findings suggest that the cardiovascular benefits previously observed in broader T2D populations may also extend to patients with AF.

RELEVANCE TO EUROPEAN PRACTICE

The increasing prevalence of both AF and T2D means that European HCPs will encounter a growing number of patients with overlapping arrhythmic, thromboembolic, and metabolic risk. European clinical practice increasingly emphasises integrated management of AF, including treatment of comorbidities and cardiometabolic risk factors alongside anticoagulation.

These findings suggest that GLP-1 RAs may have a role as part of a comprehensive cardiovascular risk-reduction strategy in

patients with T2D and AF who already have an established indication for treatment. However, these observational findings should not influence decisions regarding oral anticoagulation, which remains central to stroke prevention in eligible patients with AF. Rather, the findings highlight the importance of an integrated approach to managing cardiovascular and metabolic risk in this high-risk population.

WHAT ARE THE NEXT STEPS FOR RESEARCH?

Despite careful risk-set matching and multivariable adjustment, confounding by

indication and healthy-user bias cannot be excluded. Information on factors such as BMI, glycated haemoglobin (HbA1c), blood pressure, lifestyle, and treatment adherence was unavailable. The results should therefore be interpreted as associations rather than evidence of causality. Therefore, further randomised trials are needed to confirm these observations and clarify the role of GLP-1 RAs in patients with AF and T2D.

References

1. Pham M. Impact of GLP-1 receptor agonists on risk of stroke in patients with atrial fibrillation: a Danish nationwide cohort study. Abstract 86894. ESC Congress, 28-31 August, 2026.