**The risk of permanent discontinuation of oral anticoagulation in patients with atrial fibrillation: data from the GARFIELD-AF registry**

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**Background**: Oral anticoagulant therapy (OAC) is indicated for patients (pts.) with atrial fibrillation (AF) at increased stroke risk. There are few real-world data on OAC discontinuation and its impact on outcomes. We describe outcome of pts. in the Global Anticoagulant Registry in the FIELD of AF (GARFIELD-AF) who permanently discontinue their OAC during 2 years of follow-up.

**Methods**: pts. included in GARFIELD-AF had a new diagnosis of AF and at least one stroke risk factor: 22811 pts. enrolled between April 2013 and August 2016, were included that received OAC for stroke prevention. OAC was considered to be permanently discontinued if stopped for at least 7 days. Marginal structural models estimated the effect of discontinuation on the following outcomes: composite endpoint of death/non-haemorrhagic stroke or systemic embolism (NHS+SE)/myocardial infarction (MI), death/NHS+SE, and also death, NHS+SE and MI. Adjustments were made for both baseline factors and time dependent variables.

**Results**: 9.5% of pts. discontinued OAC over a median follow-up of 710 days (IQR 487-731), 43.8% within the first 4 months. Last OAC used was a vitamin-K-antagonist in 46,5% and a NOAC in 53,5%. After adjustment, we found that relative to pts. who remained on OAC, those who discontinued had a significantly increased risk for all endpoint-events (p<0.001): death/NHS+SE/MI, death/ NHS+SE, death, NHS+SE and MI (Fig. 1A). These results were confirmed by sensitivity analyses among pts. who did not restart any OAC (Fig. 1B), and when a 30-day window was used. (Fig. 1C).

**Conclusion**: The rate of discontinuation in this study was 9.5% over a 2-year follow-up. When OAC was stopped for at least 7 days, the clinical outcome was significantly worse, including a higher chance of dying, whether or not OAC was restarted afterwards. These results imply that care should be taken when considering permanent discontinuation of OAC treatment in pts. with AF.

Figure 1. Adjusted hazard ratios of patients that discontinued OAC

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