

# Sex-gender and antithrombotic therapy in patients with atrial fibrillation: results from the ATA-AF study by the Italian Scientific Societies ANMCO and FADOI

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**Introduction** Atrial fibrillation is the most common cardiac arrhythmia and the lifetime risk for developing AF for men and women aged more than 40 years is 1:4. Women with AF seem to have an increased risk for cardiovascular events, and less anticoagulant treatment

among women has been suggested to be a contributing factor. The present post-hoc analysis from the large observational ATA-AF study aimed to determine the difference by sex-gender in Italian patients with AF, with particular attention to antithrombotic therapy.

**Methods** The observational ATA-AF study was conducted in 360 hospital centers in Italy, 164 Cardiology and 196 Internal Medicine, from May to July 2010. During a period of 4 weeks for each centre, all consecutive patients aged  $\geq 18$  years discharged with a documented primary or secondary diagnosis of atrial fibrillation, and ambulatory patients were included in the study. Atrial fibrillation could be diagnosed during the index hospitalization/visit or in the 12 months before enrolment. Descriptive analyses were reported for categorical and continuous variables. In non-valvular patients, the association between the non-prescription of oral anticoagulants and potential predictors, including age, type of atrial fibrillation, need for assistance, cognitive impairment, and modified HAS-BLED score (without labile INR) was assessed by multivariable logistic regression analysis.

**Results** Overall, 7148 patients with atrial fibrillation (47% females and 53% males) were enrolled. In the subgroup of non-valvular patients enrolled in ATA-AF (n=4845, females=2139), female patients displayed greater prevalence of CHA2DS2-VASC  $\geq 2$  (96.1% vs 80.7%;  $p < 0.0001$ ) and CHADS2  $\geq 2$  (68.2% vs 60.4%;  $p < 0.0001$ ). Moreover, more females than males were considered at high risk of bleeding, as assessed by means of a study-specific modified HAS-BLED score  $\geq 3$  (31.3% and 26.1%;  $p < 0.0001$ ). Oral anticoagulants (vitamin K antagonists) were used in 55.5% of non-valvular patients, and they were less frequently prescribed in females than in males patients (50.9% vs 59.2%;  $p < 0.0001$ ). On the other side, significantly more females than males patients received antiplatelet drugs (40.0% vs 32.4%;  $p < 0.0001$ ). According to multivariable analysis, high hemorrhagic risk (OR 5.94, 95% CI 4.70-7.51), paroxysmal AF (OR 3.88, 95% CI 3.11-4.83), cognitive dysfunction (OR 2.18, 95% CI 1.57-3.02) and need for assistance (OR 1.31, 95% CI 1.02-1.67) were significantly related with non-prescription of OAC, while age  $> 75$  years did not (1.00, 95% CI 0.79-1.26).

**Conclusions** Data from literature raise concern about a 'gender gap' in prescription of oral anticoagulants among women, despite a paradoxically higher hazard of thromboembolic complications. These findings are confirmed by results of our study. However, concomitant higher hemorrhagic risk and other characteristics that were more frequent in female patients of our study population (i.e. severe cognitive and functional impairment) may at least partly explain this attitude towards gender-related under-prescription of oral anticoagulants.