Use of oral anticoagulant therapy in the general population: a real-life study after new oral anticoagulants introduction

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The oral anticoagulant therapy is widely used for treatment and prevention of many arterial and venous thromboembolic diseases (Perk J et al., 2013). It is mainly used as primary and secondary prevention of venous thromboembolism, in the prevention of systemic embolism in patients with prosthetic heart valves or atrial fibrillation (AF), but also, in selected cases, as in the secondary prevention of stroke (Perk J et al., 2013).
It has been estimated that about 1-2% of the general population, mainly elderly patients (Pirmohamed M et al., 2006, Virjo I et al., 2010), receives anticoagulation medication. Noncompliance with anticoagulation therapy can have a significant clinical impact by increasing thromboembolic and stroke risk, which in turn leads to prolonged hospital admission, residential care and this could play an important role in increasing the consumption of health care resources as well worsening morbidity and mortality (Chen SY et al., 2013). The objective of this retrospective analysis was: i) to describe the trend of oral anticoagulant (OAC) in a large cohort of patients, ii) to evaluate determinants of use, among baseline characteristics, in naïve treated and iii) to estimate medication persistence as to the start of therapy in the AF subgroup. We conducted a retrospective cohort analysis using the Regional Health Services (RHS) databases of Lombardy. To describe the use of OAC, we included all naïve patients aged ≥ 18 treated in Lombardy Region from 1st July 2013 to 31th November 2014. Persistence was defined as the continuation of the starting anticoagulant therapy during the follow-up period. For the new class of direct oral anticoagulant agents (NOACs) patients, we defined discontinuation as the first lapse in therapy of 30 days since the end of coverage of the last prescription. Therefore, considering unreliable an estimate of the persistence on warfarin or acenocoumarol using the DDDs, we have defined discontinuation from vitamin-K antagonists (VKAs) as the first gap of 35 days since subsequent international normalized ratio test performed. To compare the medication persistence of naive with NOACs or VKAs, we selected the subgroup of patients with a hospitalisation of AF in the 90 days before index prescription and without previous AF in the 12 months before, because it represented a group of patients whose indication for OAC use was chronic. During the study period, 197,626 subjects (1.8% of the Lombardy population) used OAC: 8% used NOACs and 92% VKAs. After applying the inclusion and exclusion criteria, we identified 59,769 adult naïve patients 13,287 (22%) started with NOACs and 46,482 (78%) with VKAs. In the naïve cohort, mean age was 74 years across the 2 groups and proportion of male was higher in VKAs group. In the sub-group of patients with previous AF, the 1-year persistence of VKAs was lower than NOACs (baseline-covariates adjusted hazard ratio of 0.23, 95% confidence interval 0.22 – 0.26).Our study shows a progressive use of NOACs in naïve patients. Those treated with NOACs are with less co-pathologies than those treated with VKAs. The persistence of treatment is considerably higher in NOACs than in VKAs treated patients. Other studies are needed to identify the risk factors for low persistence, allowing a better indication of anticoagulation drugs for specific patients.

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