THE START-SSC-EVENTS REGISTER
Non-profit study
Study protocol, version 1, March 2014

Background

The management of acute bleeding or thrombotic events during treatment with the vitamin K antagonists (VKAs) is substantially well standardized. Conversely, the management of these events in patients treated with the direct oral anticoagulants (DOACs) remains uncertain, and very little experience is so far available in the literature. With the introduction of the DOACs, firstly dabigatran, approved for stroke prevention in patients with non-valvular atrial fibrillation and subsequently rivaroxaban, also approved for the treatment of venous thromboembolism, and apixaban, it becomes crucial to improve our knowledge on the real life management of DOACs-associated events and on outcomes related to currently available interventions. In particular, because of the current lack of antidotes and of validated clinical protocols for the management of adverse events, it is important to collect and analyze information on how DOAC-associated events have been treated in emergency conditions in clinical practice in different areas of the world.

Aim

To prospectively collect, by means of an electronic database (Start-SSC-event register), clinical data that are useful to analyze and to identify the best way to treat acute bleeding or thrombotic events that occur during anticoagulation with

DOACs and to describe clinical outcomes both in the short-term and after a 6-month follow-up.

Design

Prospective, observational, international, multi-center study. Estimated duration of the recruitment period is one-year, follow-up is 6 months.

Methods

The START-SSC-Event Register is based on an electronic database that will collect anonymous information on the type of event, on the management strategies used to treat the acute event, and on the short-term and longer-term clinical outcomes. The START-SSC-Event Register is a section of the START Register, a computerized electronic database managed by the University Hospital Sant'Orsola Malpighi in Bologna- Italy. The START-SSC-Event is ran by an autonomous scientific board and all data will be managed independently from the START Register. Each participating center will be enabled to access the registry using a center-specific code. Each Center or single practitioner who wants to participate has to fill an initial information sheet and to provide an e-mail address that will be used as the center specific account. At this point, the investigator will receive a temporary password, to be changed with a final password. Each center is allowed to have only one account and one password.

Study population

Inclusion criteria:

- Patient on treatment with a DOAC and with acute bleeding or thrombotic events, regardless of the dose and the duration of anticoagulant treatment.
- Patient aged 18 years or older
- Patient able to provide signed informed consent

Exclusion criteria:

- Concomitant participation in an interventional trial

Definition of eligibility criteria and patient subgroups

- Major, spontaneous or post-traumatic bleeding (defined as: fatal bleeding, bleeding leading to surgical intervention, bleeding occurring in a critical organ (intracranial or intraspinal, retroperitoneal, intraocular resulting in visual impairment), overt bleeding associated with a drop in haemoglobin levels of two or more grams/deciliter or requiring the transfusion of two or more units of red blood cells).
- Acute thromboembolic events (venous and arterial)

Information to be collected for each included event

- Baseline demographic characteristics
- Relevant clinical history

- Type/Dose/Last intake/Duration of DOAC treatment at the time of the event
- Timing, type and detailed description of the event
- Renal and liver function at the time of the event and during the hospitalization
- Potential interfering drugs at the time of the event or in the week before the event
- Type and results of laboratory assays (including coagulation assays) at the time of hospitalization and until discharge
- Treatment strategies undertaken to manage the event (reporting each day of treatment separately, if appropriate)
- Final outcomes of the event, assessed after 6 months

Sample size and statistical analysis

Considering the descriptive nature of this study, a sample of convenience of 100 patients has been planned. Descriptive statistics (mean, standard deviation, median, and range) will be calculated for continuous variables while count and percentage distribution will be calculated for categorical variables.