The Impact of Community Use of Novel Oral Anticoagulants on an Academic Medical Center

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The Impact of Community Use of Novel Oral Anticoagulants on an Academic Medical Center

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Introduction:

Thomas Jefferson University Hospital is a 957 licensed acute care bed academic medical center with 3 hospital locations in the Philadelphia area. Our neuroscience hospital, JHN, is the only hospital within the community and is monitored in an admissions to our hospital system, mainly at our neuroscience hospital. A summation of adverse events associated with anticoagulation use.

Background of the Program:

Although dabigatran, rivaroxaban and apixaban offer:

- a relatively fixed dose regimen, dosage adjustment is required in moderate renal dysfunction, and use is contraindicated in severe renal failure.
- hepatic dysfunction.
- pregnancy.
- patients with a baseline CrCl < 50 ml/min
- a history of intracranial, intraocular, spinal, retroperitoneal, or gastrointestinal bleeding.
- a history of active peptic ulcer disease.
- a history of alcoholism.
- a history of mastectomy.
- a history of suicide attempt.
- a history of bleeding disorder.
- a history of migratory thrombophlebitis.
- a history of sickle cell disease.
- a history of glaucoma.
- a history of asthma.
- a history of chronic obstructive pulmonary disease.
- a history of allergic reaction to a novel anticoagulant.
- a history of malignancy.

The availability of the novel anticoagulants offers an attractive alternative to warfarin use.

Adverse Events:

As part of ongoing quality and safety initiatives, bleeding events associated with novel anticoagulant use are being monitored in hospital and as outpatient care. All hospital staff are aware of the adverse events associated with novel anticoagulant use.

Summary of Adverse Events and Patient Characteristics:

8 patients were admitted to TJHN from November 2011 to May 2012. All were associated with dabigatran use. In patients were transferred from an outside hospital to our neuroscience hospital for HEMI management. In 5 patients an anticoagulant was identified as the culprit. The most commonly prescribed dose of dabigatran was 150 mg twice daily. Avergage age was 84 yrs. (range 56-104 yrs.)

Average admission serum creatinine was 1.8 mg/dl (range 0.5-3.0). Females made up 50% of patients for the management of bleeding included withholding dabigatran, supportive care, administration of blood products and hemostatic agents, when required. Diagnosis one month in 3 patients, conventional anti-CPVHD.

One patient died.

The average ICU length of stay was 69 days (range 5-370).

The average ICU length of stay was 109 days (range 5-370) with an average ICU cost of $24,855.79. Total inpatient costs averaged $46,603.00 with a cost range of $15,963.00 – 160,899.00. The average length of stay was 93 days (range 5-180 days).

Conclusions:

The perceived ease of use of the novel anticoagulants has resulted in increasingly popular utilization of these agents in the outpatient setting. The perceived ease of use, as well as the ability to better titrate therapy, make these agents attractive in the elderly population, since it is often difficult for the group to keep in track of their office visits for the required laboratory testing needed with warfarin management, mainly due to transportation and health issues.

These anticoagulants must be used with caution in certain subsets of patients: the elderly, those with renal dysfunction, those with concomitant medications which increase the risk for bleeding and anticoagulation. We have found that implementing a formalized program of education and training with our pharmacy teams was very useful in maintaining appropriate patient selection by providing educational materials to the house staff; our involvement can lead to improved prescribing of novel anticoagulants in the community.

We recommend that institutions re-evaluate their approach to patient care and embrace the new technology as needed. The perceived ease of use of these agents has resulted in an increased utilization of these agents in the outpatient setting.

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