Economics and Outcomes of Sotalol In-Patient Dosing Approaches in Patients with Atrial Fibrillation

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Abstract

Background: There exists variability in the administration of inpatient sotalol therapy for symptomatic atrial fibrillation(AF). The impact of this variability on patient in-hospital and 30-day post-hospitalization costs and outcomes is not known. Also, the cost impact of intravenous sotalol, which can accelerate drug loading to therapeutic levels, is unknown. Methods: 133 AF patients admitted for sotalol initiation at an Intermountain Healthcare Hospital from January 2017-December 2018 were included. Patient and dosing characteristics were described descriptively, and the impact of dosing schedule was correlated with daily hospital costs/clinical outcomes during the index hospitalization and for 30 days. The CMS reimbursement for 3-day sotalol initiation is \$9,263.51. Projections of cost savings were made considering a 1-day load using intravenous sotalol that costs \$2,500.00 to administer. Results: The average age was 70.3 ± 12.3 years, 60.2% were male with comorbidities of: hypertension(83%), diabetes(36%), and coronary artery disease(53%). Mean ejection fraction was $59.9 \pm 7.8\%$ and median QTc was 453.7 ± 37.6 ms before sotalol. No ventricular arrhythmias developed, but bradycardia(<60 bpm) was observed in 37.6% of patients. The average length of stay was 3.9 ± 4.6 (median: 2.2) days. Post-discharge outcomes and rehospitalization rates stratified by length of stay were similar. The cost per day was estimated at \$2,931.55 (1:\$2,931.55, 2:\$5,863.10, 3:\$8,794.65, 4:\$11,726.20). Conclusions: Inpatient sotalol dosing is markedly variable and results in the potential of both cost gain and loss to a hospital. In consideration of estimated costs, there is the potential for \$871.55 cost savings compared to a 2-day oral load and \$3,803.10 compared to a 3-day oral load.

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