1030

Evaluation of Safety and Efficacy of Rapid-Titration Treprostinil at a Large Community Hospital

Willmon J, Louzon P, Tarver J, Wilson M,
AdventHealth Orlando, Orlando, FL

Background: Treprostinil is a prostacyclin analog with vasodilatory properties indicated for treatment of pulmonary arterial hypertension (PAH). There is currently no standard protocol for treprostinil dose escalation beyond the labeling recommendation of 1.25 ng/kg/min per week. Use of rapid titration allows for faster attainment of target dose and potential to limit and aggressively treat side effects. The purpose of this review is to evaluate the safety and efficacy of rapid-titration practices of treprostinil given intravenously or subcutaneously in a large community hospital.

Methods: A retrospective chart review was performed in all patients who received treprostinil titrations either intravenously or subcutaneously during the period of September 1, 2016 through August 31, 2018. Baseline characteristics including comorbidities and hemodynamics were collected. Descriptive data on titration included treprostinil initial dose, titration method (dose and interval), maximum dose achieved, total titration period and dose at discharge, as well as regimen for transitioning to inhaled or oral treprostinil, if applicable. Primary endpoints assessed were adverse effects seen within 24 hours of dose change including hypotension, nausea, vomiting, diarrhea, and pain identified through provider notes and utilization of rescue medications. Secondary endpoints included change in level of care, discontinuation of the medication or decrease in the titration, use of a ventilator, intensive care unit (ICU) length of stay, hospital length of stay, and change in NYHA class from admission to either discharge or outpatient follow up appointment.

Results: Thirty-three patients were analyzed that received rapid titration, defined as any titration faster than the package labeling of 1.25 ng/kg/min per week. Most patients were titrated on the intravenous formulation. Incidence of adverse effects, although high in some cases (pain 94%, nausea 88%), was comparable to previous studies of rapid-titration treprostinil. Despite this high incidence, side effects were managed with scheduled and prn antiemetics and pain medications with attainment of >60% of goal dose in most patients. Approximately 45% of patients reached goal dose without need for titration decrease or interruption. Fluid boluses (median 250 mL) were needed in 24% of patients with hypotension, but no vasopressors were required as a result of treprostinil therapy. Additionally, improvement in NYHA class was seen in 19% of patients.

Conclusions: Rapid-titration treprostinil may be an acceptable practice for faster attainment of goal dose with preemptive management of side effects.

Presented at the 2019 Pulmonary Hypertension Association (PHA) Pulmonary Hypertension Professional Network (PHPN) Symposium.