First Inhaled Treatment Approved for PAH

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The Food and Drug administration approved the first inhaled therapy for pulmonary arterial hypertension in December.

Iloprost, a stable synthetic analogue of prostacyclin, causes selective pulmonary vasodilation and improves exercise capacity and hemodynamics in patients with PAH. The random, placebo-controlled, double-blind, parallel-group, domized clinical trial leading to approval enrolled 203 adult patients with PAH; 101 received inhaled iloprost, and 102 received placebo. The response rate in the iloprost group (6-9 inhalations per day) was 19% vs. 4% for the placebo group. The rate was determined using a primary composite end point that incorporated improvement in exercise capacity, improvement in at least one New York Heart Association (NYHA) class, and no death or deterioration. Adverse events with iloprost included coughing, flushing, cough, jaw pain, and headache.

Iloprost comes in single-use glass ampoules (2 mL) containing 20 mcg iloprost for inhalation via the Prodose Adaptive Aerosol Delivery System. Iloprost should not be inhaled more than once every 2 hours and is not effective in sleeping patients. Vital signs should be monitored when starting iloprost because of the risk of syncope. Iloprost is not yet commercially available in the United States, will be marketed by CoTherix Inc. as the Ventasis Inhalant Solution under exclusive contract with Schering AG, the drug’s marketer in Europe and Australia. CoTherix had previously received orphan drug designation for iloprost from the FDA, in August 2004.

**Hematology Effects**

Anemia is sometimes seen in patients receiving MOBIC. This may be due to fluid retention, GI blood loss, and an accompanying decreased effect upon endogenous production. Patients on long-term treatment with MOBIC should have their hemoglobin or hematocrit checked if they exhibit any signs or symptoms of anemia.

**Drug Interactions**

Iloprost may be used in patients with known hypersensitivity to prostacyclin. It should not be used in patients with severe renal impairment or those receiving concomitant use of other prostacyclin agonists, such as epoprostenol or the stable prostanoid TRIPA. Iloprost should not be used with aspirin, warfarin, or other oral anticoagulants and may cause pelvic constriction. Iloprost should not be used in patients with severe pulmonary hypertension. The random, domized clinical trial leading to approval enrolled 203 adult patients with PAH; 101 received inhaled iloprost, and 102 received placebo. The response rate in the iloprost group (6-9 inhalations per day) was 19% vs. 4% for the placebo group. The rate was determined using a primary composite end point that incorporated improvement in exercise capacity, improvement in at least one New York Heart Association (NYHA) class, and no death or deterioration. Adverse events with iloprost included coughing, flushing, cough, jaw pain, and headache.