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FDA Warns Against Use of Terbutaline to Treat Preterm Labor

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February 17, 2011 (***UPDATED February 27, 2011***)— Clinicians should not use injectable terbutaline to prevent preterm labor or treat it beyond 48 to 72 hours because of the risk for maternal heart problems and death, the US Food and Drug Administration (FDA) announced.

In addition, oral terbutaline should not be used for the prevention or any treatment — acute or prolonged — of preterm labor because it shares the same safety risks as the injectable version and has not proven to be effective.

The FDA acknowledged that healthcare professionals may deem it clinically necessary to administer injectable terbutaline in an urgent situation in a hospital setting but stated that such treatment should not extend beyond 48 to 72 hours. The agency also is advising clinicians not to use either form of the drug outside of a hospital setting.

The labels of the injectable and oral forms of terbutaline will bear a boxed warning and a contraindication regarding its use with pregnant women.

Terbutaline, a bronchodilator, is FDA-approved to prevent and treat bronchospasms associated with asthma, bronchitis, and emphysema. Clinicians sometimes use it on an unapproved but legal off-label basis for acute obstetric purposes, including the treatment of preterm labor and uterine hyperstimulation.

It has also been used on an off-label basis during longer periods to prevent recurrent preterm labor. A number of manufacturers produce generic versions of both injectable and oral terbutaline.

The FDA warnings about the drug come after an agency review of postmarketing reports of maternal death and serious cardiovascular adverse events submitted to its Adverse Event Reporting System (AERS).

A search of the system identified 16 maternal deaths dating from 1976, when the drug was first marketed, to 2009. Three of these deaths involved outpatient use of terbutaline given by subcutaneous pump, and 9 involved use of oral terbutaline alone or in addition to subcutaneous or intravenous terbutaline. Of these 9 cases, 2 involved outpatient use of oral terbutaline, and 7 cases involved inpatient use of oral terbutaline. For the remaining 4 deaths, the routes of terbutaline administration were subcutaneous, intravenous, or unknown.

The agency also identified 12 cases of pregnant women experiencing serious cardiovascular events, including cardiac arrhythmia, myocardial infarction, pulmonary edema, hypertension, and tachycardia, between January 1, 1998, and July 2009. Terbutaline was administered by subcutaneous pump in 3 of the 12 cases, and 5 cases involved use of oral terbutaline alone or in addition to subcutaneous terbutaline. Three of these 5 cases involved outpatient use of oral terbutaline, and 2 cases involved inpatient use.

Additional serious adverse reactions have been reported after prolonged administration of oral or injectable terbutaline to pregnant women, including transient hyperglycemia, hypokalemia, and myocardial ischemia.

The FDA stated that the cardiovascular risks outweigh any potential benefit to pregnant women receiving injections of terbutaline on a prolonged basis, or any treatment with the tablet version of the drug.

The American College of Obstetricians and Gynecologists also discourages the use of terbutaline for preventing preterm labor, the agency noted.

More information about this announcement is available on the FDA Web site.

To report adverse events related to terbutaline, contact MedWatch, the FDA's safety information and adverse event reporting program, by telephone at 1-800-FDA-1088, by fax at 1-800-FDA-0178, online at http://www.fda.gov/medwatch, or by mail to MedWatch, FDA, 5600 Fishers Lane, Rockville, Maryland 20852-9787.

http://www.fda.gov/Safety/MedWatch/SafetyInformation/SafetyAlertsforHumanMedicalProducts/ucm243843.htm

Laurie Barclay, MD, contributed to this news article.