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Methocarbamol

Updated: January 30, 2017.

OVERVIEW

Introduction

Methocarbamol is a commonly used, centrally acting muscle relaxant and has not been linked to instances of liver injury.

Background

Methocarbamol (meth" oh kar' ba mol) is a guaifenesin derivative and acts centrally as a muscle relaxant by an unknown mechanism. Methocarbamol was approved for use in the United States in 1957, and currently more than 3 million prescriptions are filled yearly. Methocarbamol is indicated for the relief of acute, painful musculoskeletal conditions. Methocarbamol is available in 500 and 750 mg tablets in several generic formulations, both alone and in combination with other drugs and under the brand names of Robaxin and Marbaxin. The recommended dosage is 1500 mg orally three to four times daily. The most common side effects of methocarbamol are drowsiness blurred vision, headache, nausea and skin rash.

Hepatotoxicity

While the product label for methocarbamol states that it can cause jaundice (including cholestatic jaundice), there is little published evidence to suggest that methocarbamol is a cause of hepatic injury or clinically apparent drug induced liver disease. During clinical trials of methocarbamol, some patients had to stop treatment because of nausea, dizziness, or other nonspecific complaints, but no serum aminotransferase levels or other laboratory results were reported. Methocarbamol appears to be well tolerated, but the lack of monitoring of serum aminotransferase levels during clinical trials with methocarbamol makes it impossible to rule out the possibility of mild liver injury occurring with treatment.

Likelihood score: E (Unlikely cause of clinically apparent liver injury).

Drug Class: Muscle Relaxants

PRODUCT INFORMATION

REPRESENTATIVE TRADE NAMES

Methocarbamol – Generic, Robaxin®

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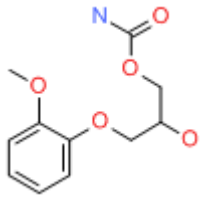
DRUG CLASS

Autonomic Agents: Muscle Relaxants, Central

COMPLETE LABELING

Product labeling at DailyMed, National Library of Medicine, NIH

CHEMICAL FORMULA AND STRUCTURE

DRUG	CAS REGISTRY NO	MOLECULAR FORMULA	STRUCTURE
Methocarbamol	532-03-6	C11-H15-N-O5	

ANNOTATED BIBLIOGRAPHY

References updated: 30 January 2017

Zimmerman HJ. Muscle spasmolytics. In, Hepatotoxicity: The Adverse Effects of Drugs and Other Chemicals on the Liver. 2nd Ed. Philadelphia: Lippincott, 1999. p. 544-45.

(Expert review of hepatotoxicity published in 1999; discussed dantrolene, chlorzoxazone and baclofen, but not methocaramol).

Hibbs RE, Zambon AC. Agents acting at the neuromuscular junction and autonomic ganglia. In, Brunton LL, Chabner BA, Knollman BC, eds. Goodman & Gilman's The pharmacological basis of therapeutics, 12th ed. New York: McGraw-Hill, 2011. p. 255-76.

(Textbook of pharmacology and therapeutics).

Chou R, Peterson K, Helfand M. Comparative efficacy and safety of skeletal muscle relaxants for spasticity and musculoskeletal conditions: a systematic review. J Pain Symptom Manage 2004; 28: 140-75. PubMed PMID: 15276195.

(Thorough review of the pharmacology, efficacy and side effects of the muscle relaxants).

Chalasani N, Bonkovsky HL, Fontana R, Lee W, Stolz A, Talwalkar J, Reddy KR, et al.; United States Drug Induced Liver Injury Network. Features and outcomes of 899 patients with drug-induced liver injury: The DILIN Prospective Study. Gastroenterology 2015; 148: 1340-1352.e7. PubMed PMID: 25754159.

(Among 899 cases of drug induced liver injury enrolled in a US prospective study between 2004 and 2013, 5 [0.7%] were attributed to muscle relaxants, including dantrolene, baclofen, chlorzoxazone and metaxalone, but none were linked to use of methocarbamol).