

Antibiotics: Single largest class of drugs causing liver injury

1 December 2008

Antibiotics are the single largest class of agents that cause idiosyncratic drug-induced liver injury (DILI), reports a new study in *Gastroenterology*, an official journal of the American Gastroenterological Association (AGA) Institute. DILI is the most common cause of death from acute liver failure and accounts for approximately 13 percent of cases of acute liver failure in the U.S. It is caused by a wide variety of prescription and nonprescription medications, nutritional supplements and herbals.

"DILI is a serious health problem that impacts patients, physicians, government regulators and the pharmaceutical industry," said Naga P. Chalasani, MD, of the Indiana University School of Medicine and lead author of the study. "Further efforts are needed in defining its pathogenesis and developing means for the early detection, accurate diagnosis, prevention and treatment of DILI."

In this prospective, ongoing, multi-center observational study — the largest of its kind — patients with suspected DILI were enrolled based upon predefined criteria and followed for at least six months. Those with acetaminophen liver injury were excluded.

Researchers found that DILI was caused by a single prescription medication in 73 percent of the cases, by dietary supplements in 9 percent and by multiple agents in 18 percent. More than 100 different agents were associated with DILI; antimicrobials (45.5 percent) and central nervous system agents (15 percent) were the most common. Of the dietary supplements causing DILI, compounds that claim to promote weight loss and muscle building accounted for nearly 60 percent of the cases. The study found that at least 20 percent of patients with DILI ingest more than one potentially hepatotoxic agent.

DILI remains a diagnosis of exclusion and thus detailed testing should be performed to exclude

competing causes of liver disease; importantly, acute hepatitis C virus (HCV) infection should be carefully excluded in patients with suspected DILI by HCV RNA testing. Researchers found no relationship between gender and severity of DILI, but individuals with diabetes experienced more severe DILI.

Source: American Gastroenterological Association

APA citation: Antibiotics: Single largest class of drugs causing liver injury (2008, December 1) retrieved 12 October 2022 from <https://medicalxpress.com/news/2008-12-antibiotics-largest-class-drugs-liver.html>

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