



HYDROCODONE

(Trade Names: Vicodin[®], Lortab[®], Lorcet-HD[®], Hycodan[®], Vicoprofen[®])

October 2014
DEA/OD/ODE

Introduction:

Since 2009, hydrocodone has been the second most frequently encountered opioid pharmaceutical in drug evidence submitted to federal, state, and local forensic laboratories as reported by DEA's National Forensic Laboratory Information System (NFLIS) and System to Retrieve Information from Drug Evidence (STRIDE).

Licit Uses:

Hydrocodone is an antitussive (cough suppressant) and narcotic analgesic agent for the treatment of moderate to moderately severe pain. Studies indicate that hydrocodone is as effective, or more effective, than codeine for cough suppression and nearly equipotent to morphine for pain relief.

Hydrocodone is the most frequently prescribed opiate in the United States with more than 136 million prescriptions for hydrocodone-containing products dispensed in 2013 and with nearly 65.5 million dispensed in the first six months of 2014 (IMS Health[™]). There are several hundred brand name and generic hydrocodone products marketed, most of which are combination products. The most frequently prescribed combination is hydrocodone and acetaminophen (Vicodin[®], Lortab[®]).

Chemistry/Pharmacology:

Hydrocodone [4,5 α -epoxy-3-methoxy-17-methylmorphinan-6-one tartrate (1:1) hydrate (2:5), dihydrocodeinone] is a semi-synthetic opioid most closely related to codeine in structure and morphine in producing opiate-like effects. The first report, that hydrocodone produces euphoria and habituation symptoms, was published in 1923. The first report of hydrocodone dependence and addiction was published in 1961.

Illicit Uses:

Hydrocodone is abused for its opioid effects. Widespread diversion via bogus call-in prescriptions, altered prescriptions, theft, and illicit purchases from Internet sources are made easier by the present controls placed on hydrocodone products. Hydrocodone pills are the most frequently encountered dosage form in illicit traffic. Hydrocodone is generally abused orally, often in combination with alcohol.

Of particular concern is the prevalence of illicit use of hydrocodone among school-aged children. The 2013 Monitoring the Future Survey reports that 1.4%, 4.6% and 5.3% of 8th, 10th, and 12th graders, respectively, used Vicodin[®] for nonmedical purposes in the past year.

The American Association of Poison Control Centers (AAPCC) reports that in 2012, there were 29,391 total exposures and 36 deaths associated with hydrocodone in the U.S. The 2013 National Survey on Drug Use and Health (NSDUH) reports that 24.4 million people in the U.S. population, aged 12 and older, used hydrocodone for nonmedical purposes in their lifetime, compared to 25.7 million in 2012. There was a significant decrease in reports

of lifetime nonmedical use among those aged 12 to 17 and aged 18 to 25, compared to 2012. According to the Drug Abuse Warning Network (DAWN ED), an estimated 82,480 emergency department visits were associated with nonmedical use of hydrocodone in 2011. This number of ED visits represents a 107% significant increase from the number of ED visits reported in 2004 (39,846). The Florida Department of Law Enforcement reported 431 deaths as being related to hydrocodone from January to June 2013, an 8.8% increase from the previous six months (396 deaths, July – December 2012). Of these 431 deaths, 158 of them were determined to be caused by hydrocodone.

As with most opiates, abuse of hydrocodone is associated with tolerance, dependence, and addiction. The co-formulation with acetaminophen carries an additional risk of liver toxicity when high, acute doses are consumed. Some individuals who abuse very high doses of acetaminophen-containing hydrocodone products may be spared this liver toxicity if they have been chronically taking these products and have escalated their dose slowly over a long period of time.

User Population:

Every age group has been affected by the relative ease of hydrocodone availability and the perceived safety of these products by medical prescribers. Sometimes viewed as a "white collar" addiction, hydrocodone abuse has increased among all ethnic and economic groups.

Illicit Distribution:

Hydrocodone has been encountered in tablets, capsules, and liquid form in the illicit market. However, hydrocodone tablets with the co-ingredient, acetaminophen, is the most frequently encountered form. Hydrocodone is not typically found to be clandestinely produced; diverted pharmaceuticals are the primary source of the drug for abuse purposes. Doctor shopping, altered or fraudulent prescriptions, bogus call-in prescriptions, diversion by some physicians and pharmacists, and drug theft are also major sources of the diverted drug.

The National Forensic Laboratory Information System (NFLIS) is a DEA database that collects scientifically verified data on drug items and cases submitted to and analyzed by state and local forensic laboratories. The System to Retrieve Information from Drug Evidence (STRIDE) provides information on drug seizures reported to and analyzed by DEA laboratories. In 2013, there were 34,961 hydrocodone reports identified in the NFLIS and STRIDE systems, a decrease from 41,401 reports in 2012.

Control Status:

The DEA published in the Federal Register the final rule placing hydrocodone (in bulk, single entity products, and combinations) in Schedule II of the CSA. This rule is effective as of October 6, 2014.

Comments and additional information are welcomed by the Drug and Chemical Evaluation Section, Fax 202-353-1263, telephone 202-307-7183, or E-mail ODE@usdoj.gov.