

Hepatitis C (HCV)

Dr. Joseph E. Graas, Scientific Director
Dr. Edward Moore, Medical Director
Dr. Paul Robandt, Scientific Director

Hepatitis C was originally referred to as non-A non-B Hepatitis, before finally being named Hepatitis C in the 1990s. The Hepatitis C virus targets the liver and is transmitted by body fluids, most frequently blood. High risk populations include intravenous drug users, Asian and Pacific Islanders, health care workers, and infants born to Hepatitis C infected mothers. Also at risk, though less so, are those engaged in high risk sexual behavior, those who snort cocaine using shared equipment, and those that share toothbrushes, razors, and other personal items with infected individuals. It is estimated that about 2% of the world's population is infected with Hepatitis C.

The initial stage of the infection can easily go undetected as the symptoms of the acute phase may be as mild as having a cold or the flu. Acute Hepatitis C symptoms occur two weeks to six months after infection and last two to twelve weeks. Once the acute phase is over the virus

persists in over 75% of infected individuals. At this stage there are few obvious symptoms and only with increasing time does liver damage become apparent. It is only with diligence of taking a good history, a high degree of suspicion, and most importantly laboratory screening will Hepatitis C be detected.

Early detection can prevent or lessen the complications of disease progression. Nowadays the virus can be classified into genotypes that have targeted drug treatments that depend on the virus genotype and stage of liver damage presented in the patient. Current cure rates can be 95% in uncomplicated cases, which may remove the virus from the patient but cannot reverse liver damage and further complications such as liver failure and liver cancer.

The cost to society of untreated Hepatitis C is immense when one considers the morbidity, mortality, emotional distress of having the disease and loss of work that the untreated disease inflicts. There is no vaccine for Hepatitis C. Hepatitis C is still the leading cause of liver trans-

plantation. Over 167,000 deaths due to liver cancer and 326,000 deaths due to cirrhosis are attributed to Hepatitis C worldwide.

In contrast to the total cost to society and the individual, the cost of blood screening is negligible. Many laboratories tests for Hepatitis C in clients by looking for the antibodies produced to defend the individual against infection. It would be easy to include the test when clients come for their annual exam. The test is very simple and determines prior exposure to Hepatitis C. This diagnosis would prompt additional viral RNA testing that would indicate an active infection.

It would be tragic if the disease were left undetected until it becomes physically apparent when treatments available have an almost complete cure rate. Advancements in diagnosis, and especially treatment of this form of Hepatitis, recently have reached a level that, when treated with weekly anti-viral drugs for a period of 2 to 6 months, will cure almost all of those infected.

???

Question of the Month

People with a mental disorder are more likely to experience a substance use disorder and people with a substance use disorder are more likely to have a mental disorder when compared with the general population. According to the National Survey of Substance Abuse Treatment Services (N-SSATS), about 45% of Americans seeking substance use disorder treatment have been diagnosed as having a co-occurring mental and substance use disorder.

Source: SAMHSA

Question: "I have a pregnant patient who doses daily in the clinic, but is negative for Methadone Metabolite...how is this possible?"

Answer: For patients who receive Methadone doses greater than 20-30 mg/day, it is expected that both Methadone and Methadone Metabolite will test positive utilizing a cutoff of 300 ng/mL. If a patient tests positive for Methadone and negative for Methadone Metabolite, it is considered an abnormal result. The only exception to this is a pregnant female. Regardless of the dose, as the female progresses through pregnancy her body and the fetus consume most of the parent medication (Methadone). Therefore, the body doesn't convert and excrete the Methadone Metabolite. As the patient advances in her pregnancy, it is possible, even at high doses, for the patient to be negative for both Methadone and Methadone Metabolite.

Toxicology Times © 2018 San Diego Reference Laboratory.

The content of San Diego Reference Laboratory's Publication, The Toxicology Times, is provided free of charge and is intended to assist the medical personnel in the interpretation of laboratory results for drug treatment programs. The information contained in The Toxicology Times is not intended or implied to be a substitute for professional medical advice.