

INFECTIOUS DISEASE WAIVERS

CONDITION: HEPATITIS (ICD9 573.3)

Revised January 2002

AEROMEDICAL CONCERNS: The symptoms of acute and chronic hepatitis include fever, malaise, nausea, and pain, any or all of which could be distracting in an aviation mission. Risk of transmission to other unit personnel is of great concern. Cases may progress to cirrhosis which has its own aeromedical significance. (See Cirrhosis APL) Care should be taken to identify those individuals whose disease is complicated by alcohol ingestion.

WAIVERS:

Initial flight applicants :

Acute Hepatitis A, B, E: A history of these acute infections is not disqualifying as long as six months have elapsed, liver functions have returned to normal, they remain asymptomatic and in the case of acute hepatitis B, that the HB surface antigen has cleared.

Acute Hepatitis C: This condition may be filed as information only if the condition is fully resolved with no evidence of disease via RNA viral load testing.

Chronic Hepatitis: Usually not granted exception to policy or waiver.

Other Forms of Hepatitis: Evaluated on a case-by-case basis.

Rated Aviation Personnel:

Acute Hepatitis A or E: Personnel will be grounded until the liver enzymes have returned to normal, but then may be returned to full flying duty without further action.

Acute Hepatitis B: Personnel may be returned to full flying duty when liver enzymes return to normal, they are asymptomatic and the HB surface antigen has cleared. This will be filed as information only.

Acute Hepatitis C: Personnel may return to full flying duty if the condition is fully resolved with no evidence of disease via RNA viral load testing. This will be filed as information only.

Chronic Hepatitis B: This condition is disqualifying but waivers are possible provided liver biopsy shows no evidence of significant fibrosis and hepatitis studies do not show active replication (HBeAg or HB DNA present).

Chronic Hepatitis C: This condition may be considered for waiver after treatment and/or if liver enzymes are normal and liver biopsy does not reveal significant, progressive disease as reviewed by a gastroenterology specialist.

Other Forms of Hepatitis: Evaluated on a case-by-case basis.

INFORMATION REQUIRED :

- ❖ Complete IM or GI Consult,
- ❖ Complete panel of liver function studies (to include AST, ALT, Alkaline phosphatase, LDH, Total bilirubin, and GGT) and full hepatitis serologies (to include hepatitis A, B, and C); and
- ❖ Liver biopsy may be required.

FOLLOW-UP: Acute hepatitis once resolved requires no specific follow-up. Those aircrew members with chronic hepatitis will require annual internal medicine or gastroenterology consultation with annual submission of liver function tests and full hepatitis serologies. Due to the predisposition of the development of hepatoma, those with chronic hepatitis-B will require annual ultrasound evaluation with alpha-fetoprotein levels. Repeat liver biopsy may be required upon progression of liver disease or with any relapse. Those with chronic hepatitis C will require evaluation by gastroenterology every 3 years for repeat liver biopsy and evaluation for therapy.

TREATMENT: Treatment for hepatitis A and E is supportive. Aircrew will be grounded during the acute phase. All military personnel should be immunized with the two shot series of Hepatitis A vaccine as prophylaxis. Aircrew will be grounded for the duration of all other forms of treatment for chronic hepatitis to include interferon with ribivarin or other nucleoside analogue (e.g. lamivudine) combinations, steroids, or azathioprine due to multiple side effects. Treatment with alpha interferon and or lamivudine has been shown to moderate signs of chronic HBV infection and eliminates HBeAg in one third of patients, with eventual clearance of HBsAg in some of the responders. Treatment for chronic hepatitis C has only a sustained virologic and biologic response rate of approximately 40% with the new, longer acting interferon and ribivarin. Waivers are not recommended during treatment.

DISCUSSION: The most common causes of hepatitis are the viruses (A, B, C, D, E), alcohol and drugs. Less common etiologies include other viruses (Epstein-Barr, yellow fever, cytomegalovirus, and coxsackievirus).

Hepatitis-A infection is fortunately brief in duration and chronic hepatitis does not follow acute infection. Rare cases lead to fulminant hepatitis. In the majority of aviation personnel, administration of the Hepatitis A vaccine should greatly reduce, if not eliminate, this disease in our population.

For those patients whose hepatitis is a result of infection with hepatitis-B virus as an adult, 10% progress to chronic disease; cases arising in childhood progress to chronicity more frequently. Spontaneous recovery after 1 year is rare and only occurs in 5-15% of cases.

With hepatitis C, after acute infection, 15%-25% of persons appear to resolve their infection without sequelae as defined by sustained absence of HCV RNA in serum and normalization of ALT levels. Chronic HCV infection develops in most persons (75%-85%) with persistent or fluctuating ALT elevations indicating active liver disease developing in 60%-70% of chronically infected persons. In the remaining 30%-40% of chronically infected persons, ALT levels are normal. Most studies have reported that cirrhosis develops in 10%-20% of persons with chronic hepatitis C over a period of 20-30 years.

The majority of those with chronic persistent hepatitis following acute hepatitis do not progress to cirrhosis. In autoimmune chronic active hepatitis, 25% have established cirrhosis at the time of the first biopsy. As many as 20-30% will have evidence of other autoimmune disorders such as arthritis, thyroiditis, or SLE. Mean survival is approximately 5 years in untreated patients. Treatment is often withdrawn at 1 year but there is a 50% relapse rate in the following year with most relapsing within six months. Many of those who relapse will require lifelong maintenance therapy. Approximately 40% of all patients with acute alcoholic hepatitis will develop cirrhosis in 5 years; abstinence in the interim does not guarantee avoidance of this condition. Those who continue heavy alcohol consumption have a mortality rate of greater than 50% at seven years; this is reduced to 25% with abstinence.

REFERENCES:

Centers for Disease Control and Prevention: <http://www.cdc.gov>

“Recommendation for the Prevention and Control of Hepatitis C Virus (HCV) Infection and HCV-related Chronic Disease.” MMWR Oct 16, 1998/47 (RR 19): 1-39.