

Ashwani K Singal, MD, Series Editor

## Symptoms and signs of acute alcoholic hepatitis

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**Author contributions:** Basra G drafted the manuscript; Basra S revised the manuscript; Parupudi S supervised and approved the final version.

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Received: October 28, 2010 Revised: March 8, 2011

Accepted: March 15, 2011

Published online: May 27, 2011

### Abstract

Although there is not one specific sign or symptom related to alcoholic hepatitis (AH), a constellation of symptoms and signs can help make the diagnosis of AH with reasonable accuracy. Documentation of chronic and active alcohol abuse is paramount in making a diagnosis of AH. Clinical presentation after abstinence for more than 3 mo should raise doubts about the diagnosis of AH and dictate the need for considering other causes of liver disease, decompensation of alcoholic cirrhosis, sepsis and malignancy as the cause of patient's clinical profile.

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**Key words:** Alcoholic hepatitis; Alcoholic liver disease; Clinical features; Symptoms and signs

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Basra G, Basra S, Parupudi S. Symptoms and signs of acute alcoholic hepatitis. *World J Hepatol* 2011; 3(5): 118-120 Available from: URL: <http://www.wjgnet.com/1948-5182/full/v3/i5/118.htm> DOI: <http://dx.doi.org/10.4254/wjh.v3.i5.118>

### INTRODUCTION

A typical patient with alcoholic hepatitis (AH) provides a history of an average daily consumption of over 80 g of ethanol for over 5 years<sup>[1]</sup>. However, the duration of excessive drinking before the onset of liver disease could vary from 3 mo to 36 years. One study had evidence of liver disease with excessive drinking of less than 1 year duration<sup>[2]</sup>. Not uncommonly, patients may have ceased alcohol consumption several weeks before the onset of symptoms<sup>[3]</sup>. However, abstinence of more than 3 mo is unlikely to be associated with the diagnosis of AH.

Although the peak age distribution of AH is 40-60 years of age, the disease has been seen in a patient as young as 20 years and as old as 80 years<sup>[2]</sup>. Gender distribution of the disease varies across different studies with a male predominance in one study<sup>[4]</sup>. However, in another study of 169 patients, females contributed to more than 60% of cases<sup>[2]</sup>. This conclusion may be related to a higher number of black women in this series. However, when the data are combined across different series, the gender distribution was found to be equal<sup>[1]</sup>. A higher risk of liver injury may be associated with an individual's racial and ethnic heritage<sup>[5]</sup>. Racial distribution across studies shows that 70%-80% of cases are seen among whites and 20%-30% among blacks. The rates of alcoholic cirrhosis are higher in African-American and Hispanic males compared to Caucasian males and the mortality rates are highest in Hispanic males<sup>[6]</sup>. These differences do not appear to be related to differences in amounts of alcohol consumed<sup>[7]</sup>.

Clinical features of acute AH can be subdivided into four broad headings.

**Table 1 Common signs and symptoms amongst hospitalized patients with alcoholic hepatitis**

Symptom or Sign	% of patients	
	Mendenhall <i>et al</i> <sup>[1]</sup> (n = 363)	Lischner <i>et al</i> <sup>[2]</sup> (n = 169)
Hepatomegaly	87	81
Jaundice	60	37
Ascites	57	35
Hepatic encephalopathy <sup>a</sup>	45	18
Splenomegaly	26	
Fever	23	56
GI hemorrhage	10	23
Malnutrition <sup>b</sup>	90	56
Esophageal varices		12
Abdominal pain	18	

<sup>a</sup>Defined as altered consciousness, coma, and/or asterixis; <sup>b</sup>Defined as muscle wasting, weight loss, low albumin, amenorrhea, or pellagra.

## FEATURES SPECIFIC TO EXISTING ALCOHOLIC HEPATITIS

Although clinical jaundice is present in 40%-60% cases (Table 1), hyperbilirubinemia is present in almost every patient with AH and is considered a cardinal feature of this disease. Other symptoms reported in AH patients include right upper quadrant pain, fever, tachycardia and tender enlarged liver. Fever should be attributed to AH after excluding infection and malignancy. Hepatic bruit due to increase in blood flow is characteristic of AH. However, its reported frequency varies across different studies. This is not a common finding and in a large series was seen in only about 2% of cases<sup>[8]</sup>. However, demonstration of increased blood flow using Doppler Duplex examination was useful for diagnosis of AH in one study<sup>[9]</sup>. Presence of hepatic bruit should be further worked up before labeling it AH related since coexistent HCC can contribute to the hepatic bruit. Other non-specific symptoms may be associated such as nausea, vomiting, malaise and anorexia. The frequency of these symptoms and signs varies with the severity of disease with a higher frequency in patients with severe disease. With a more severe disease, patients may have associated complications such as hepatic encephalopathy, renal failure or hepatorenal syndrome, ascites due to portal hypertension and bleeding tendencies due to coagulopathy and/or thrombocytopenia. Malnutrition is frequently seen in these with a frequency of up to 90% in one series<sup>[1]</sup>. This could be due to protein calorie malnutrition, Kwashiorkor or generalized caloric under nutrition or Marasmus. Patients should be examined for clinical signs of malnutrition such as reduced muscle mass, decreased triceps skin fold thickness, swelling on legs or edema of feet in the absence of ascites, decreased mid arm muscle circumference and hypoalbuminemia. This is important as many studies have shown a correlation between malnutrition and negative outcome of the disease<sup>[10,11]</sup>. Malnutrition is also a risk factor for the occurrence of infections which patients with alcoholic hepatitis are prone to.

## FEATURES DUE TO UNDERLYING CIRRHOSIS

Concomitant cirrhosis is present in about 50%-60% cases with AH<sup>[12]</sup>. Hence, these patients may have features of cirrhosis such as spider angiomas, palmar erythema, ascites and variceal bleeding. Other commonly noted features are Dupuytren's contracture, gynecomastia and loss of pubic or axillary hair, parotid gland enlargement and testicular atrophy in males and amenorrhea with infertility in females. Although these are seen more commonly with alcoholic cirrhosis, these are not specific or sensitive for diagnosis of alcohol related cirrhosis.

## ASSOCIATED DISEASES

As alluded to earlier, patients with alcoholic liver disease are prone to development of infections. Increased gut permeability and transmigration of gut bacteria, associated malnutrition and depressed innate immunity are some of the reasons that make alcoholics more prone to infections<sup>[13-18]</sup>. In one series, about a third of patients had infections with the urinary tract being the most common site of infection in about 23% cases<sup>[2]</sup>. Other common infections are spontaneous bacterial peritonitis, bacterial pneumonia, tuberculosis, septicemia and lung abscess. Other associated conditions are gastrointestinal bleeding (10%-22%), alcoholic gastritis (10.7%), pancreatitis (8.8%-11.4%), neuropathy (10.0%), cardiomyopathy (2.4%), diabetes mellitus (10.7%) and cancer (3.6%)<sup>[1,2]</sup>.

## SIGNS OF ALCOHOL WITHDRAWAL

Patients with AH may also present with withdrawal symptoms. Mild to moderate symptoms include irritability, anxiety, headache, sweating, tachycardia and hand tremors with clammy skin. Severe symptoms include delirium tremens in which the patient is confused and may have visual hallucinations along with agitation, convulsions and fever. The frequency of alcohol withdrawal is inversely proportional to the severity of alcoholic hepatitis with 35% cases with mild disease and 15% of severe disease<sup>[1]</sup>.

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S- Editor Zhang HN L- Editor Roemmele A E- Editor Zhang L