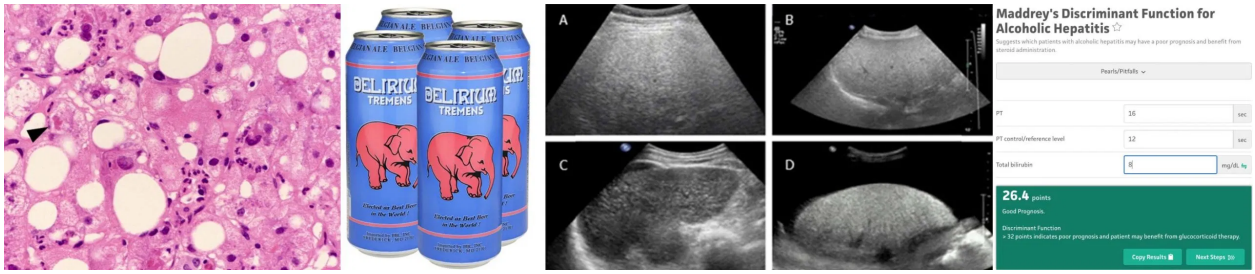
Search the site ...

Alcoholic Hepatitis

February 13, 2021 by **Josh Farkas**



(https://emcrit.org/ibcc/alcoholic-hepatitis/attachment/alcheptop/)

CONTENTS

clinical features

(back to contents) (#top)

clinical findings

- Common symptoms:
  - Jaundice.
  - Fever.
  - Tender hepatomegaly.
  - Nausea, vomiting, and anorexia.
- Patients may have superimposed features from underlying alcoholic cirrhosis (e.g., ascites).
- Severe disease may cause encephalopathy.

epidemiology

- Alcoholic hepatitis occurs following chronic alcoholism (e.g., >>5 years), but it can occur after shorter periods of intense exposure (e.g., >6 months).(32277902 (https://pubmed.ncbi.nlm.nih.gov/32277902/)) Patients may *stop* drinking days or weeks prior to admission, because they feel

too ill to drink.

- Steady alcohol intake is more likely to cause alcoholic hepatitis than binge drinking. Hepatitis can result from daily consumption of ~40 grams alcohol in women or ~60 grams of alcohol in men (e.g., only *three* drinks per day among women).
- The relationship between alcohol intake and alcoholic hepatitis is complex. Numerous factors, including sex, genetics, and nutritional status, may affect the risk of alcoholic hepatitis.

evaluation

(back to contents) (#top)

labs

- **Transaminases** are mildly-moderately elevated:
  - AST is usually more than twice the ALT. An AST/ALT ratio <1.5 is seen in only 2% of patients with alcoholic hepatitis, so this may suggest an alternative diagnosis.(26921783 (https://pubmed.ncbi.nlm.nih.gov/26921783/)).
  - AST >500 IU/L or ALT >300 IU/L suggests an alternative diagnosis.(25901427 (https://pubmed.ncbi.nlm.nih.gov/25901427/))
- **Bilirubin** is elevated, at least >3 mg/dL, and is often extremely elevated (with a median value of 13 mg/dL)(31219169 (https://pubmed.ncbi.nlm.nih.gov/31219169/))
- **INR** elevation is usually seen.
- **Acetaminophen level** should be obtained if there is any concern for ingestion.
- An extensive hepatitis panel (e.g., HAV, HBV, HCV) isn't mandatory if there is a clear history of alcohol ingestion. If the alcohol history is unclear, then evaluation may be indicated for infectious hepatitis, autoimmune hepatitis (with antinuclear antibody and anti-smooth muscle antibody tests), or drug/toxin-induced liver injury.
  - However, when initiating a prolonged course of steroid therapy, it may be wise to exclude chronic HBV or HCV infections.

right upper quadrant ultrasound with Doppler sonography

- This is mostly useful to exclude alternative diagnoses (e.g., biliary obstruction or hepatic vein thrombosis). It will also evaluate for the presence and extent of ascites.
- Alcoholic liver disease may cause hepatomegaly with fatty infiltration of the liver. However, these are nonspecific findings which, for example, may also be seen among patients with nonalcoholic fatty liver disease.

infectious evaluation

- Infection frequently complicates alcoholic hepatitis, so it should be sought out more aggressively than usual.(31370067 (https://pubmed.ncbi.nlm.nih.gov/31370067/))
- If ascites is present, it should be sampled to evaluate for spontaneous bacterial peritonitis (more on paracentesis to exclude spontaneous bacterial peritonitis *here* (https://emcrit.org/ibcc/sbp/#paracentesis)).
- Some guidelines recommend obtaining blood cultures in all patients with alcoholic hepatitis, irrespective of fever.(29336434 (https://pubmed.ncbi.nlm.nih.gov/29336434/))

neurological investigation

- Lumbar puncture may be indicated if fever and substantial alteration of mental status are present.
- CT scan of the head may be indicated for altered mental status.

alcoholic hepatitis vs. cirrhosis

(back to contents) (#top)

scope of the problem

- Epidemiology, signs, symptoms, and lab abnormalities are extremely similar between alcoholic cirrhosis and alcoholic hepatitis.
- Alcoholic hepatitis and alcoholic cirrhosis *overlap* to a large extent (e.g., the presence of cirrhosis doesn't exclude alcoholic hepatitis).

therapeutic implications

- The management of both conditions is overall extremely similar (below), consisting primarily of supportive care.

- The only major difference between the acute management of alcoholic hepatitis versus cirrhosis is the use of steroid. The benefit of steroid in alcoholic hepatitis is controversial, so when in doubt omission of steroid may often be reasonable.

features to help sort out alcoholic hepatitis vs. cirrhosis (26921783 (https://pubmed.ncbi.nlm.nih.gov/26921783/))

(https://emcrit.org/ibcc/alcoholic-hepatitis/attachment/alchepvscir/)

---

management

(back to contents) (#top)

---

management of alcohol withdrawal

- For patients with severe liver disease and hepatic encephalopathy, phenobarbital should be avoided (given the inability to withdraw phenobarbital if patients develop worsening obtundation due to hepatic encephalopathy).
- Altered mental status may reflect hepatic encephalopathy or alcohol withdrawal. This distinction should be approached thoughtfully with a detailed history and examination, because the treatments of these conditions are considerably different.
  - Some patients may stop drinking more than four days prior to admission, which makes alcohol withdrawal unlikely.
- The treatment of alcohol withdrawal is discussed further *here* (https://emcrit.org/ibcc/etoh/) .

management of hepatic encephalopathy

- Avoid deliriogenic and sedating medications as much as possible. For patients with agitated delirium who aren't intubated, dexmedetomidine may be a safe option to promote comfort without suppressing respiratory drive.
- There should generally be a *low* threshold to initiate rifaximin and lactulose for patients with deteriorating mental status. Placement of a small-bore nasoenteric tube may be needed to provide medication and nutritional support.
- More on hepatic encephalopathy *here* (https://emcrit.org/ibcc/he/) .

nutritional support

- Supplementation with IV **thiamine:**
  - For patients with normal mentation, 100 mg IV thiamine daily is adequate.
  - For patients with delirium, Wernicke's encephalopathy is possible, so higher doses of thiamine are indicated (e.g., 500 mg IV q8hr). More on Wernicke's encephalopathy *here* (https://emcrit.org/ibcc/wernicke/) .
- Patients with chronic malnutrition may be at risk for *refeeding syndrome*, in which case nutritional support may need to be escalated gradually (more on this *here* (https://emcrit.org/ibcc/refeeding/)). However, most patients can receive full nutritional support. Protein should *not* be withheld due to fear of exacerbating hepatic encephalopathy.
- Aggressive electrolyte repletion is often necessary (especially magnesium and phosphate).
- Pyridoxine supplementation (vitamin B6) may be considered, given that it is commonly deficient in these patients and inadequate levels may reduce the seizure threshold.
- Multivitamins should be provided (as patients may be deficient in vitamin A, vitamin D, folate, zinc, and copper).

steroid

- Steroid is somewhat controversial, but it is generally recommended for more severe disease.
  - The largest RCT (the STOPAH trial) *didn't* find benefit from steroid in the primary analysis, but rather only detected a 28-day mortality benefit after multivariate, post-hoc analysis (https://www.thebottomline.org.uk/summaries/icm/stopah/) .(25901427 (https://pubmed.ncbi.nlm.nih.gov/25901427/))

- Some meta-analyses *have* detected 28-day mortality benefit, but *not* the most recent Cochrane meta-analysis.(32089834 (https://pubmed.ncbi.nlm.nih.gov/32089834/))

- Steroid is generally indicated in patients with Maddrey's Discriminant Function >32 (calculated using MDCalc (https://www.mdcalc.com/maddreys-discriminant-function-alcoholic-hepatitis)). If your lab doesn't report a control PT time, it may be estimated to be 12 seconds.
- The usual dose is 40 mg/day of prednisolone (or 32 mg/day of methylprednisolone IV, for patients unable to take oral medications).
- Beyond the usual contraindications to steroid, recent GI hemorrhage should be considered a contraindication.
- The steroid course is long (e.g., >28 days with a taper) and will usually be continued beyond the time of ICU discharge.
  - The *Lille score* (https://www.mdcalc.com/lille-model-alcoholic-hepatitis) should be used after 4-7 days to determine whether the patient is responding to steroid. A score of 0.45 or greater suggests lack of benefit from steroid, implying that steroid may be discontinued.

avoidance of hepatorenal syndrome (HRS)

- Albumin may be considered for patients who are volume depleted (in preference to crystalloid).
- Beta-blockers and antihypertensives should be discontinued or down-titrated.
- Nephrotoxins should be strictly avoided.

coagulation

- 10 mg IV vitamin K should be provided if the INR is elevated. This eliminates the possibility of vitamin K deficiency, allowing the INR to be used more accurately as a prognostic factor.

stress ulcer prophylaxis

- Prophylaxis should be considered even among patients who aren't intubated (especially in patients who are coagulopathic and treated with steroid). A common cause of death within this patient population is gastrointestinal hemorrhage.

transplantation

- The role of transplantation in alcoholic hepatitis is highly controversial.
- Especially for patients with their initial presentation for alcoholic liver disease, transplantation might be an option. Transplant hepatology or the regional transplant center may be consulted.

---

podcast

(back to contents) (#top)

(https://i1.wp.com/emcrit.org/wp-content/uploads/2016/11/apps.40518.14127333176902609.7be7b901-15fe-4c27-863c-7c0dbfc26c5c.5c278f58-912b-4af9-88f8-a65fff2da477.jpg)

Follow us on iTunes (https://itunes.apple.com/ca/podcast/the-internet-book-of-critical-care-podcast/id1435679111)

---

questions & discussion

(back to contents) (#top)

To keep this page small and fast, questions & discussion about this post can be found on another page ***here*** (https://emcrit.org/pulmcrit/hyperthermia/) .

(https://i0.wp.com/emcrit.org/wp-content/uploads/2016/11/pitfalls2.gif)

- Failure to manage other comorbid conditions occurring along with alcoholic hepatitis (e.g., Wernicke's encephalopathy, refeeding syndrome, malnutrition).
- Incorrectly attributing multifactorial delirium to alcohol withdrawal.
- Failing to evaluate thoroughly for underlying infection (e.g., spontaneous bacterial peritonitis).

references

- 25901427 Thursz MR, Richardson P, Allison M, et al.; STOPAH Trial. Prednisolone or pentoxifylline for alcoholic hepatitis. N Engl J Med. 2015 Apr 23;372(17):1619-28. doi: 10.1056/NEJMoa1412278 [PubMed (https://pubmed.ncbi.nlm.nih.gov/25901427/)]
- 26921783 Crabb DW, Bataller R, Chalasani NP, et al.; NIAAA Alcoholic Hepatitis Consortia. Standard Definitions and Common Data Elements for Clinical Trials in Patients With Alcoholic Hepatitis: Recommendation From the NIAAA Alcoholic Hepatitis Consortia. Gastroenterology. 2016 Apr;150(4):785-90. doi: 10.1053/j.gastro.2016.02.042 [PubMed (https://pubmed.ncbi.nlm.nih.gov/26921783/)]
- 29336434 Singal AK, Bataller R, Ahn J, Kamath PS, Shah VH. ACG Clinical Guideline: Alcoholic Liver Disease. Am J Gastroenterol. 2018 Feb;113(2):175-194. doi: 10.1038/ajg.2017.469 [PubMed (https://pubmed.ncbi.nlm.nih.gov/29336434/)]
- 31219169 Hosseini N, Shor J, Szabo G. Alcoholic Hepatitis: A Review. Alcohol Alcoholism. 2019 Jul 1;54(4):408-416. doi: 10.1093/alcalc/agz036 [PubMed (https://pubmed.ncbi.nlm.nih.gov/31219169/)]
- 31370067 Vergis N, Atkinson SR, Thursz MR. Assessment and Management of Infection in Alcoholic Hepatitis. Semin Liver Dis. 2020 Feb;40(1):11-19. doi: 10.1055/s-0039-1693402 [PubMed (https://pubmed.ncbi.nlm.nih.gov/31370067/)]
- 32089834 Rachakonda V, Bataller R, Duarte-Rojo A. Recent advances in alcoholic hepatitis. F1000Res. 2020 Feb 10;9:F1000 Faculty Rev-97. doi: 10.12688/f1000research.20394.1 [PubMed (https://pubmed.ncbi.nlm.nih.gov/32089834/)]
- 32277902 Sehrawat TS, Liu M, Shah VH. The knowns and unknowns of treatment for alcoholic hepatitis. Lancet Gastroenterol Hepatol. 2020 May;5(5):494-506. doi: 10.1016/S2468-1253(19)30326-7 [PubMed (https://pubmed.ncbi.nlm.nih.gov/32277902/)]