Alcohol-Associated Liver Disease (2024)

About the Guideline

- The recommendations for practice were contributed by authors selected by the Board of Trustees and Practice Parameters Committee of the American College of Gastroenterology (ACG).
- A thorough review of the literature was conducted; the articles were evaluated using a grading system to determine the level of evidence and strength of recommendations, and then were agreed upon by consensus among the contributors.
- Alcohol-associated liver disease (ALD) remains the leading cause of liver-related mortality in the United States.

Key Clinical Considerations

Become familiar with the recommendations and best-practice statements provided in this guideline, especially if you work in an acute care setting.

Epidemiology and Disease Burden

- ALD is a spectrum ranging from early asymptomatic liver injury to advanced disease. Patients with ALD who also have concurrent alcohol use disorder (AUD) pose significant issues in treatments.
- AUD is diagnosed based on the consumption of alcohol. Males who consume more than three drinks per day and females who consume more than two drinks per day (considered harmful drinking) are diagnosed with AUD. In addition, binge drinking is considered an AUD and is defined by the consumption of more than five alcoholic drinks (for men) and more than four alcoholic drinks (for women) within a two-hour period, which corresponds to a blood alcohol concentration of 0.08% (0.08 g/dL).

Environmental and Genetic Determinants

- There is a relationship between the amount of alcohol intake and the risk of developing alcoholic liver disease.
- Factors intensifying the risk for alcoholic liver disease include obesity, Type 2 diabetes mellitus, smoking cigarettes, and a diagnosis of chronic hepatitis C or hepatitis B.

Disease Spectrum of Alcoholic Liver Disease

- The largest increase in AUD and ALD is among younger adults, women, and minorities; there has been an increase in prevalence since 2014.
- For patients with suspected or confirmed AUD, liver function tests and an ultrasound should be performed.
- Alcoholic fatty liver disease may be diagnosed when signs of AUD are exhibited in conjunction with hepatic steatosis. Hepatic steatosis can be diagnosed by ultrasound and/or by abnormally elevated liver enzymes (aspartate aminotransferase [AST] and alanine aminotransferase [ALT]) and a serum bilirubin less than 3mg/dL when other liver diseases have been ruled out.

Diagnosis of AUD

- A detailed history of alcohol use is important in diagnosing AUD, along with the exclusion of other diseases affecting the liver.
- The Alcohol Use Disorders Inventory Test (AUDIT), a 10-item self-reported questionnaire, is the primary screening tool used for assessing abuse and dependence on alcohol. The Alcohol Use Disorders Identification Test–Consumption is a 3-question screening tool that is easier and quicker to use in clinical settings.
- Screening for concurrent psychosocial disorders or issues is important in improving the success of patients trying to abstain from alcohol. These disorders or issues may include, but are not limited to, the following: anxiety, affective disorders, posttraumatic stress disorder (PTSD), psychosis, sleeping disorders, chronic pain, sexual abuse, violence, and/or social isolation.
- Screening for AUD should be done at every medical encounter across all clinical settings.
- As an adjunct to screening tools, alcohol indirect biomarkers may be useful and reflect alcohol-induced tissue damage. The biomarkers may also be useful in patients who cannot be interviewed due to disease state or intoxication.

Management of Alcoholic Liver Disease

- For patients with AUD, motivational interviewing is the most commonly used behavioral intervention. This technique is used to raise awareness of the dangers, complications, and consequences of alcohol use.
- Abstinence from alcohol is the most effective treatment to reverse liver damage.
- Vaccinations for patients with chronic liver disease should include hepatitis A virus, HBV, influenza, pneumococcus, herpes zoster, tetanus, diphtheria, pertussis, and SARS-CoV-2.
- Pharmacological therapies
    - Baclofen has been found to be the safest for patients with alcoholic hepatitis (AH) and/or advanced liver disease and is recommended to prevent relapse in patients with AUD. Baclofen is usually started at 5 mg three times a day, with a dose escalation based on patient tolerance to a maximum dose of 15 mg three times per day.
    - Acamprosate or naltrexone is an optional treatment for AUD in patients with compensated ALD.
    - Gabapentin or topiramate is an optional treatment for AUD in compensated ALD, but this is a conditional recommendation.
    - Disulfiram should not be used for the treatment of AUD if there is any degree of ALD present.
    - Cautious use of benzodiazepines is the treatment of choice in patients with ALD and alcohol withdrawal syndrome (AWS); their use is recommended along with careful monitoring. Benzodiazepines have the potential to exacerbate or precipitate hepatic encephalopathy.
- Integrated multidisciplinary care
    - Common nonpharmacological therapies that may be performed to achieve abstinence from alcohol include motivational interviewing, cognitive behavioral therapy, and motivational enhancement therapy.
    - When using behavioral therapy, the risk of impairment should be considered in patients with a diagnosis of hepatic encephalopathy, cognitive impairment, or poor performance.
    - There has not been a strong correlation shown between abstinence and psychosocial intervention.

    - Behavioral and/or pharmacotherapy in the treatment of AUD is the most effective therapy in treating ALD.
- Management of alcohol withdrawal
    - Mild to moderate symptoms of alcohol withdrawal may occur within 6 to 24 hours of the patient's last drink. Symptoms may include hypertension, tachycardia, tremors, hyperreflexia, nausea/vomiting, anxiety, irritability, and headache.
    - Patients with moderate to severe symptoms of alcohol withdrawal should be monitored in an intensive care setting. Such symptoms may include delirium tremens, seizures, coma, cardiac arrest, and death.
    - Benzodiazepines are used to treat moderate to severe alcohol withdrawal symptoms.
    - Long-acting benzodiazepines (diazePAM or chlordiazePOXIDE) are favored to protect against seizures and delirium. Intermediate-acting benzodiazepines (LORazepam or oxazepam) are preferred for patients with poor liver function.
    - High doses of benzodiazepines require careful monitoring of patients with hepatic encephalopathy as they may exacerbate the disease.
- Management of liver disease-associated conditions
    - Alcoholic cirrhosis
        - Management of cirrhosis due to ALD should be managed as cirrhosis with any other cirrhosis cause.
        - Referral for transplantation when medically indicated is suggested for patients with complications of cirrhosis due to ALD.
        - Screening for hepatocellular carcinoma (HCC) in patients with cirrhosis due to ALD should include an ultrasound examination with or without α-fetoprotein estimation every 6 months.
    - Hepatic encephalopathy
        - Individuals with clinical neuropsychiatric features not typical of hepatic encephalopathy and altered mental status should be screened for causes.
        - Head and spinal fluid studies and drug screening are recommended for select individuals.

Alcoholic Hepatitis (AH)

- Diagnosis
    - Diagnosis of AH can be made in the presence of jaundice after heavy alcohol consumption within the previous 8 weeks. AH may also be diagnosed if there is new or worsening jaundice with concurrent complications related to the liver, in addition to abnormal liver function tests.
- History
    - It is imperative to document a patient's alcohol use as well as the date of the patient's last drink.
- Physical exam
    - Patients may exhibit signs of portal hypertension and cirrhosis.
- Laboratory and other testing
    - Specific liver function tests to be evaluated for the diagnosis of alcoholic hepatitis include the following: bilirubin (greater than 3 mg/dL), AST (50 UI/L to 400 IU/L), AST/ALT ratio (greater than 1.5), serum creatinine, international normalized ration (INR), albumin, and electrolytes.

    - To rule out infection, the following diagnostic tests should be performed: ascitic fluid cell count with culture (if ascites is present), urinalysis and culture, chest X-ray, and blood and sputum cultures.
- Liver biopsy
    - Liver biopsy is not always necessary to diagnose alcoholic hepatitis, but it may be used to confirm the diagnosis.
- Prognostic scores and natural history
    - The Maddrey Discriminant Function is a scoring system utilized to estimate the severity of alcoholic hepatitis. Higher scores on this scale (less than or equal to 32) indicate a higher chance of mortality over 30 days.
    - The Model for End-Stage Liver Disease (MELD) score is considered to be the most accurate at determining severity. A MELD score greater than 20 is associated with a 20% mortality rate in patients experiencing alcoholic hepatitis.
- Treatment
    - Nutrition and fluid replacement
        - Oral nutritional supplements are necessary to manage malnutrition and meet caloric needs in patients with AH.
        - Enteral nutrition support may be required in patients who are unable to meet caloric requirements despite oral nutritional supplements.
        - Consider replacement of thiamine, B complex vitamins, and zinc.
        - Albumin is preferred over crystalloids for volume replacement.
    - Pharmacological treatment
        - Corticosteroids
            - Corticosteroids were shown to decrease short-term mortality.
            - PrednisoLONE is the preferred agent in patients able to tolerate oral intake. MethylPREDNISolone is recommended for intravenous administration.
            - Contraindications for corticosteroid use include severe kidney failure, active hepatitis B infection, active infection, uncontrolled diabetes mellitus, and gastrointestinal bleeding.
        - Pentoxifylline
            - Not recommended for patients with severe AH.
            - Pentoxifylline is not an effective adjuvant therapy to corticosteroids.
        - Antioxidants
            - N-acetylcysteine improves survival rates at 28 days, but it has not shown any benefit at 3 or 6 months, and it is not recommended for routine use.
        - Miscellaneous
            - Universal administration of prophylactic antibiotics is not recommended for patients with severe AH who are hospitalized.
            - The role of granulocyte colony-stimulation factor (G-CSF) and microbiome-based therapies has not been shown, and further studies are needed to make a recommendation.
            - Fecal transplantation shows promising results for patients unable to tolerate steroid therapy, but it is not currently recommended.
            - Vitamin E and antioxidant cocktails have not been shown to have any benefit in severe AH.

Liver Transplantation in Alcoholic Liver Disease

- Definitive management for patients with cirrhosis and end-stage liver disease.
- Transplantation cures the liver disease, but it does not cure the underlying AUD.
- Patients are selected according to institutional and regional protocols.
- Selection of patients may involve the following:
    - Completion of a comprehensive psychosocial evaluation by a social worker and an additional specialist as well as by psychiatrists
    - Utilization of assessment tools such as the Stanford Integrated Psychosocial Assessment Tool, the High Risk for Alcohol Relapse Score, the Michigan Alcoholism Prognostics Score, the Hopkins Psychosocial Score, and the Sustained Alcohol Use Post-Liver Transplant (SALT) score
    - History of length of abstinence, untreated psychiatric disease, polysubstance abuse, legal consequences related to alcohol use, lack of insight, lack of willingness to engage in AUD treatment, multiple prior failed rehabilitation attempts, and lack of social support should be considered due to association with recurrent alcohol use after transplantation
    - Alcohol biomarkers
- Referral for liver transplant
    - Transplant centers typically require 6 months of abstinence from alcohol prior to consideration for transplantation, in addition to other criteria.
- Evaluation for comorbidities
    - Alcohol consumption and cigarette smoking are associated with increased risks of chronic kidney disease.
    - Significant comorbidities should be considered prior to liver transplantation in patients with alcoholic liver disease.
- Evaluation of risk for recidivism
    - Patients should be evaluated at clinic visits for alcohol relapse; if necessary, addiction specialists should be included in the patient's plan of care.
- Posttransplant outcomes
    - One-year posttransplant patients typically report improved health and quality of life.
    - Recurrent alcohol use is associated with a lower survival rate.

Conclusions and Prospects

- Alcohol use continues to be a problem in the United States and globally. At present, the field lacks safe and effective pharmacotherapies for the management of patients with ALD.
- AUD and ALD continue to be heath care burdens.

Reference

Jophlin, L., et al. (2024). ACG clinical guideline: Alcohol-associated liver disease. *American Journal of Gastroenterology, 119*(1), 30–54. https://journals.lww.com/ajg/fulltext/2024/01000/acg_clinical_guideline__alcohol_associated_liver.13.aspx (Level VII)