Pharmacotherapy for Alcohol Use Disorder

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KEYWORDS

• Alcohol use disorder • Pharmacotherapy • Addiction • FDA approved • Off-label • Withdrawal • Personalized medicine

KEY POINTS

- Alcohol use disorder is a devastating disease with profound clinical and economic impact, but pharmacotherapy can be quite effective at reducing alcohol consumption and improving outcomes.
- Despite strong evidence that pharmacotherapy for alcohol use disorder is appropriate for many patients with the disease, it is significantly underused.
- Multiple medications, both approved and not approved by the US Food and Drug Administration, show efficacy in the treatment of alcohol use disorder and are generally well-tolerated.
- Choosing the best medication to treat alcohol use disorder depends on treatment goals, the presence or absence of various comorbidities, medication adherence considerations, and drug availability and cost.

INTRODUCTION

Alcohol use disorder (AUD) is a severe form of problematic drinking characterized by compulsive and uncontrolled alcohol use despite evidence of harm. The fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* replaced the older diagnoses of alcohol abuse and alcohol dependence with the single diagnosis of AUD, and characterizes AUD as either mild, moderate, or severe, depending on how many of 11 defined criteria a person has experienced in the past year.[1]

According to the 2015 National Survey on Drug Use and Health, more than 16 million people in the United States over the age of 12 suffer from AUD and need treatment.[2] Furthermore, the National Institute on Alcohol Abuse and Alcoholism reports that an estimated 88,000 people die each year from alcohol-related causes, and that

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alcohol-impaired driving accounted for 31% of driving fatalities in 2014.[3] There is a profound economic impact from AUD as well; 1 study estimated the cost of excessive drinking as nearly $250 billion in 2010.[3,4] Yet despite the high prevalence and destructive nature of AUD to patients, their families, and societies around the world, and the availability of many evidence-based treatments, the vast majority of patients with AUD are left untreated[5–9]

For many patients with AUD, a personalized multidimensional approach that includes both behavioral and pharmacotherapeutic interventions is ideal. Pharmacotherapy represents a potentially effective and yet severely underused treatment option. In 2012, of all privately insured patients with AUD in the United States, only 3% received targeted pharmacotherapy.[10] Likewise, in 2015 only 8.2% of people over the age of 12 who needed treatment for AUD received treatment of any kind, the majority from a source other than a health care provider.[2] Similarly, in the United Kingdom, only 11.7% of 39,980 persons with an incident diagnosis of AUD received any relevant pharmacotherapy in the 12 months after diagnosis.[8] Many reasons have been postulated as to why pharmacotherapies have been so woefully underused, including low patient demand, insurance coverage concerns, perceived lack of effectiveness, the social stigma surrounding addiction disorders, and the lack of training of health providers.[11,12] The forces perpetuating this problem are undoubtedly complex, but effective evidence-based pharmacotherapeutic options do exist.

In this review, we summarize the evidence supporting the use of both US Food and Drug Administration (FDA)-approved and non–FDA-approved medications for the treatment of AUD. Additionally, we offer the prescriber guidance regarding which medications to use in specific circumstances.

MANAGEMENT GOALS

Although achieving complete abstinence from alcohol may be the ultimate treatment target for patients with AUD, it is important to recognize that abstinence may not be the expressed goal of many patients, and that there are several other worthy outcomes. Reducing cravings for alcohol, reducing the quantity of alcohol consumed, or reducing the number of heavy drinking days are all associated with reductions in the morbidity and mortality associated with AUD.[13,14] Likewise, additional objective markers of successful treatment often cited in addiction research literature include reductions in hepatic biomarkers of inflammation (eg, serum gamma-glutamyl transferase), or few visits to the emergency department and fewer hospitalizations.[15,16] Some medications are best used when a reduction in drinking is the focus, whereas others are appropriate only when complete abstinence is the goal (eg, disulfiram).[14] Given their potential benefits (described in detail elsewhere in this article), pharmacotherapy should be considered for all patients who meet criteria for an AUD. Specific approaches to achieving these goals are described herein.

Of note, the majority of AUD pharmacotherapy studies have predominantly recruited male patients, and thus may be less generalizable to women.[17] Many also focused on relatively short-term outcomes, further limiting generalizability. However, our understanding of the clinical management for AUD continues to grow. For example, although most studies have investigated the role of these medications among outpatients in either addiction treatment or primary care settings, some recent studies have explored the role of initiating AUD treatment in the inpatient setting, before discharge from an admission for an alcohol-related issue.[18]