

Alcoholism in the Elderly

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Alcohol abuse and alcoholism are common but underrecognized problems among older adults. One third of older alcoholic persons develop a problem with alcohol in later life, while the other two thirds grow older with the medical and psychosocial sequelae of early-onset alcoholism. The common definitions of alcohol abuse and dependence may not apply as readily to older persons who have retired or have few social contacts. Screening instruments can be used by family physicians to identify older patients who have problems related to alcohol. The effects of alcohol may be increased in elderly patients because of pharmacologic changes associated with aging. Interactions between alcohol and drugs, prescription and over-the-counter, may also be more serious in elderly persons. Physiologic changes related to aging can alter the presentation of medical complications of alcoholism. Management of alcohol withdrawal in elderly persons should be closely supervised by a health care professional. Alcohol treatment programs with an elder-specific focus may improve outcomes in some patients. (Am Fam Physician 2000;61:1710-6.)

When caring for older patients who have problems related to alcohol use, family physicians often encounter interrelated medical, behavioral, social and environmental factors. In such cases, physicians must maintain a high index of suspicion and a nonjudgmental attitude, and should be able to recognize patient defenses and effectively support the patient's family members. A flexible approach allows physicians to individualize treatment for advanced age, physical and cognitive impairment, limited financial resources and varying patient preferences.

Fundamental shifts in the delivery of health care are changing the patterns of treatment for alcohol abuse.(1) Patients with mild problem drinking who do not meet the criteria for alcohol abuse or dependence may benefit from brief, targeted counseling by their family physician.(2) Some older alcoholic patients may decline referral to treatment programs because of perceived negative stigma. Family physicians must manage medical complications, coordinate alcohol-related treatment and address the consequences of alcoholism for family members and the community.

Definitions of Alcohol-Related Problems

Criteria from the Diagnostic and Statistical Manual of Mental Disorders, 4th ed. (DSM-IV) for alcohol abuse and dependence are listed in Table 1.(3) These criteria may be more difficult to apply to older persons, particularly those who are retired or isolated from frequent social interaction.(4,5) The International Classification of Diseases-10 of the World Health Organization

has added an additional category, "hazardous drinking," to describe an individual's pattern of alcohol use that may result in negative consequences, although he or she does not meet criteria for alcohol dependence or abuse.(6)

The equivalent of 0.5 oz of alcohol is considered one drink: approximately 1.5 oz of distilled spirits, 12 oz of beer or 5 oz of wine. For men and women 65 years of age or older, the National Institute on Alcohol Abuse considers one drink per day to be the maximum amount for "moderate" alcohol use.(6)

Epidemiology

In the future, as the older population grows, increasing numbers of older alcoholics will require health care.(7) Although alcohol problems are often underreported, alcohol use remains common among older persons. In a study of community-dwelling persons 60 to 94 years of age, 62 percent of the subjects were found to drink alcohol, and heavy drinking was reported in 13 percent of men and 2 percent of women.(8) Overall, about 6 percent of older adults are considered heavy users of alcohol. In this study, heavy drinking is defined as having more than two drinks per day.(8)

Alcoholic patients frequently require health care in many different settings, with the highest rates of care seen in emergency, hospital, psychiatric institution and nursing facility settings.(9) In a study of 1989 Medicare hospital claims data, researchers found that 1.1 percent of all hospitalizations among beneficiaries were for alcohol-related diagnoses, and a higher percentage of admissions cited alcohol use as an underlying or associated factor.(10)

However, overall consumption of alcohol in the population appears to decline with advancing age.(4) Researchers question whether this finding represents a true decrease in consumption as individuals age, or if it reflects differences in alcohol use between current cohorts of older persons when cross-sectionally compared with younger cohorts.(4) Most longitudinal data suggest little change in alcohol consumption as people age. If change occurs, alcohol use typically decreases.(4) Reasons for a decrease in or spontaneous cessation of alcohol use among older persons include increased physiologic effects per drink, medical problems that limit accessibility or desirability of alcohol, financial strain and a trend toward fewer social events that emphasize alcohol consumption.(11)

About two thirds of elderly alcoholic patients started drinking at a young age.(7) Some attrition from alcohol-related death occurs, but many persons with early-onset alcoholism survive to develop alcohol-related illnesses compounded by changes associated with aging. Persons with early-onset alcoholism have a higher prevalence of antisocial behavior and family history of alcoholism. Decline in socioeconomic status and family estrangement are frequently seen in this group.(12) Late-onset drinking accounts for the

remaining one third of elderly persons who abuse alcohol, among whom a higher level of education and income is found.(7) Stressful life events, such as bereavement or retirement, may trigger late-onset drinking in some, but not all, persons.(13) Retirement does not predict substantial changes in alcohol use for most persons.(14)

Patients with late-onset alcoholism generally have greater resources and family support, are more likely to complete treatment and have somewhat better outcomes than patients with early-onset alcoholism.(12,15) A longitudinal study of prognosis for older alcoholics found an overall 21 percent stable remission of late-life drinking at four years, with late-onset alcoholics almost twice as likely as early-onset alcoholics to have stable remission from treatment.(15)

Pharmacology of Alcohol and Aging

Effects of alcohol at the cellular and organ levels are altered by changes in physiology related to aging. Absorption of alcohol from the gastrointestinal tract is equally rapid among all age groups.(9) However, the loss of lean body mass related to aging may reduce the volume of alcohol distribution, resulting in an increased peak ethanol concentration with any given dose of alcohol.(9,16)

Interactions that occur with alcohol, medication and the physical changes related to aging are important.(9) Alcohol interacts with numerous commonly prescribed drugs.(7) Drug absorption is affected by delayed gastric emptying and increased small bowel transit time related to alcohol use. Heavy drinkers who are malnourished may have hypoalbuminemia and altered protein binding. Blood flow through the liver and metabolic capacity decrease with aging. Acutely, alcohol impairs liver function, but chronic alcohol consumption may cause liver enzyme induction and enhanced drug metabolism. Fluctuating drug clearance may occur, particularly in patients who binge drink. For drugs with narrow therapeutic indexes, such as warfarin (Coumadin) or anticonvulsants, unpredictable clearance can have particularly hazardous consequences. Alcohol can adversely affect adherence to treatment, and medication regimens may be entirely abandoned during drinking binges. Concomitant abuse of or dependence on other drugs, such as benzodiazepines, occurs in about 15 percent of older alcoholic patients.(17)

Adverse Effects of Excessive Alcohol Use

Alcohol has adverse effects on all organ systems.(16) Physiologic reserve against stressors is weakened in older persons who drink excessively. Older persons are particularly vulnerable to falls and conditions such as delirium.

Older adults are predisposed to falls when reserve in postural support mechanisms is lost. Alcohol impairs balance and judgment, and the diuretic

effect of alcohol may cause orthostasis. Some chronic alcoholics develop myopathy, and strength is often impaired. A decrease in sensory input and foot drop can occur with peripheral neuropathy, which along with cerebellar damage causes the classically described wide-based ataxic gait. Osteoporosis, combined with the detrimental effects of alcohol on gait and balance, results in higher age-adjusted rates of hip fracture among older alcoholic patients.(7)

Several different syndromes that involve impairment of brain function can occur in alcoholic patients. Such syndromes are often superimposed on other diseases that cause cognitive impairment in older adults. Delirium, or acute confusional state, may occur during withdrawal from alcohol. Wernicke's encephalopathy describes an acute state of confusion, ataxia and abnormal eye movements that are related to thiamine deficiency. Korsakoff's syndrome refers to an isolated memory deficit, which often manifests in confabulation. Global cognitive impairment is more common, constituting an alcohol-related dementia that may be accompanied by profound cerebral atrophy. Such patients may improve as superimposed delirium clears with abstinence, but residual deficits in memory and judgment commonly remain.(16)

Gastrointestinal disease and bleeding are common reasons for emergency department visits by older alcoholics.(18) Elevated liver enzymes are found in 18 percent of older alcoholics,(19) and may indicate alcoholic hepatitis, fatty liver or cirrhosis. One half of elderly patients with cirrhosis die within one year of diagnosis.(16)

Moderate drinking may exacerbate hypertension, and heavy drinking increases the risk of stroke. "Holiday heart syndrome" refers to an episode of dysrhythmia after an alcohol binge. Although alcoholic cardiomyopathy can occur with chronic, heavy alcohol use, more cardiac deaths among older adults are caused by ischemic heart disease than by alcohol-related heart disease.

Patients who abuse alcohol are immunosuppressed and, thus, are at increased risk of infection and poor outcomes. Aspiration pneumonia occurs with vomiting and a decreased level of consciousness during intoxication. Many older adults were exposed to tuberculosis during childhood, and physicians should remain vigilant for reactivated disease in older alcoholic patients. The possibility of concomitant human immunodeficiency virus infection should not be overlooked in older patients with atypical infections, particularly those who have a history of polysubstance abuse.

Nutritional deficiencies, particularly of folate and thiamine, occur when food intake is reduced because calories are derived from alcohol, or when access to nutritious food is limited. Macrocytosis should prompt a search for vitamin deficiencies of B12 and folate, but it can be caused from a direct alcohol effect without a state of nutritional deficiency.

Cancers of the head, neck and esophagus are associated with chronic alcohol abuse, and the risk is compounded by concomitant smoking. Liver cancers occur at increased rates among patients with cirrhosis.

Alcoholic patients experience disturbed sleep, with insomnia, restlessness and suppression of rapid-eye-movement sleep. Concomitant psychiatric illness, including depression, is common among older adults who abuse alcohol. For alcoholic patients, psychiatric consultation facilitates identification and integrated treatment of any comorbid psychiatric condition.

Identification of Alcohol Problems in Older Adults

A general approach to the clinical management of older alcoholics, beginning with identification of the problem, is outlined in Table 2. Alcohol abuse and dependence are under-recognized among older adults.(20) The stereotypical concept of a "down and out" alcoholic hinders recognition of alcohol problems among older adults, particularly among older women.(5) Various constellations of findings should raise suspicion of an alcohol problem (Table 3). Physicians should keep in mind that geriatric patients with alcohol abuse or dependence may present with new or increasing cognitive decline or self-care deficits.

Several brief, practical screening tools for alcoholism are available. The CAGE questionnaire, shown in Table 4, and the Michigan Alcoholism Screening Test (MAST) are widely used.20 However, these instruments do not distinguish recent from remote drinking behavior, and among patients 60 years of age and older, the CAGE screen is insensitive with usual scoring for detecting binge drinking.(21) Therefore, supplemental information about the current quantity, frequency and pattern of alcohol use should be obtained.

Clinical Management

Alcohol withdrawal is manifested by two or more of the following symptoms: autonomic hyperactivity; increased tremor; insomnia; nausea or vomiting; transient visual, tactile or auditory hallucinations or illusions; psychomotor agitation; anxiety; or grand mal seizures.(3) Although only about 5 percent of alcoholics develop delirium or seizures during withdrawal,(3) older persons with comorbid medical conditions and decreased physiologic reserve should be closely supervised while undergoing detoxification.(7) In a study of alcohol withdrawal in hospitalized patients, the older patients had an increased risk of delirium, falls and dependency in daily activities.(22) Older adults may have prolonged confusion, resulting in a longer hospital stay and a higher risk for discharge to an extended care setting.(22) For detoxification of older alcoholic patients, hospitalization generally is recommended.(7) Thus, outpatient detoxification should be considered only for medically stable persons with a good social support system, who can reliably report escalating symptoms and who could be quickly transferred to an increased level of care, if needed.

Benzodiazepines are the mainstay of pharmacologic management of alcohol withdrawal; they can be administered on a fixed schedule or as symptoms occur. Unfortunately, data are lacking about optimal practices specific to geriatric patients. A recent review of the literature on pharmacologic treatment of alcohol withdrawal did not find evidence to make elder-specific changes to the treatment recommendations.(23) Nonetheless, some experts recommend shorter-acting benzodiazepines for elderly patients; longer-acting benzodiazepines can cause prolonged and excessive sedation because of pharmacologic changes related to aging.(24) Concomitant treatment during detoxification includes thiamine and other vitamin supplementation, correction of electrolyte disturbances and general supportive care. Judicious doses of neuroleptic medication may be required if hallucinations occur.

Treatment Options

Following detoxification, older patients can receive further treatment from inpatient programs, day treatment, outpatient therapy or community-based groups. Completion rates appear to be modestly better for elder-specific alcohol treatment programs compared with mixed-age programs.(25,26) Age-specific 12-step programs have been evaluated, but data on outcomes are limited.(25) Disulfiram (Antabuse) is not recommended for use in older patients because of the increased risk of serious adverse effects.(7,24,25) Naltrexone (Trexan) is an opiate antagonist that reduces cravings, but its role in the treatment of older alcoholics has not been established.

Delays from the time of diagnosis or detoxification to enrollment in a treatment program should be avoided.(7) Substance abuse teams can facilitate this goal. Patients vary in capability of and motivation for treatment, burden of comorbid disease, extent of family support, insurance coverage and eligibility, and access to transportation. Family physicians should assess the resources and limitations of their patients, coordinate care with interdisciplinary team members and recommend treatment options. Family members have an important role in the treatment of elderly alcoholics (Table 5) and should have access to support and education about alcoholism. Physically or cognitively frail elderly patients may benefit from comprehensive geriatric assessment and referral to appropriate community agencies for home care, nutritional programs, transportation and other services. Nursing home placement may be the most appropriate treatment option for some refractory, long-term alcoholics with dementia.

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Table 1

Criteria for Substance Abuse and Dependence

Substance abuse

A. A maladaptive pattern of use leading to clinically significant impairment or distress, with one or more of the following symptoms within a 12-month period:

1. Recurrent substance use resulting in a failure to fulfill major role obligations at work, school or home (e.g., repeated absences or poor work performance related to substance use; substance-related absences or expulsions from school; neglect of children or household).
2. Recurrent use in situations in which it is physically hazardous (e.g., driving an automobile or operating a machine when impaired by substance use).
3. Recurrent legal problems related to substance use (e.g., arrests for substance-related disorderly conduct).
4. Continued use despite persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance (e.g., arguments with spouse about consequences of intoxication; physical fights).

B. The symptoms have never met the criteria for substance dependence for this class of substance.

Substance dependence

A maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by three or more of the following, occurring at any time in the same 12-month period:

1. Tolerance, as defined by either of the following:
A need for markedly increased amounts of the substance to achieve intoxication or desired effect.
Markedly diminished effect with continued use of the same amount of the substance.

2. Withdrawal, as manifested by either of the following:
 Characteristic withdrawal syndrome from the substance.
 The same (or closely related) substance is taken to relieve
 or avoid withdrawal symptoms.
3. The substance is often taken in larger amounts or over a
 longer period of time than was intended.
4. There is a persistent desire or unsuccessful efforts to cut
 down or control substance use.
5. A great deal of time is spent in activities necessary to obtain
 the substance (e.g., visiting multiple doctors or driving long
 distances), use the substance (e.g., chain smoking), or recover
 from its effects.
6. Important social, occupational or recreational activities are given
 up or reduced because of substance use.
7. The substance use is continued despite knowledge of having a
 persistent or recurrent physical or psychologic problem likely to have
 been caused or exacerbated by the substance (e.g., current cocaine
 use despite recognition of cocaine-induced depression, or continued
 drinking despite recognition that an ulcer was made worse by alcohol
 consumption).

Specify if: with physiologic dependence: evidence of tolerance or
 withdrawal (i.e., item 1 or 2 is present); without physiologic
 dependence: no evidence of tolerance or withdrawal (i.e., neither
 item 1 nor 2 is present).

note: These criteria can be adapted for alcohol abuse and dependence.
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 Diagnostic and statistical manual of mental disorders,
 4th ed. Washington, DC: American Psychiatric Association, 1994:176-204.

Table 2

Treatment Steps for Alcoholism in Older Patients

- Identify patients requiring further evaluation.
- Office screening protocol
- High index of suspicion when suggestive constellations of findings
- Information about alcohol use and sequela
- Pattern and amount
- Social, family, legal, medical sequelae
- Prior personal history
- Family history
- Determine patient readiness to discuss treatment.
- Assess patients requiring detoxification.

Determination of risk for complicated withdrawal
History of severe withdrawal symptoms, seizures or delirium tremens
Unstable concomitant medical conditions
Impairment of cognition and self-care
Extent of family support
Availability of a prompt way to obtain higher level of care if
outpatient
detoxification is initiated
Plan for postdetoxification treatment in coordination with other
professionals.
Determination of resources and limitations
Patient preferences
Eligibility for treatment programs
Insurance coverage
Availability of community support groups
Transportation
Family involvement
Considerations for frail elders
Comprehensive geriatric assessment
Community-agency referrals as appropriate
Nursing facility placement in certain situations
Table 3
Findings That Suggest Problem Drinking in Older Adults

Cognitive decline or self-care deficits
Nonadherence with medical appointments
and treatment
Unstable or poorly controlled hypertension
Recurrent accidents, injuries or falls
Frequent visits to the emergency department
Gastrointestinal problems
Unexpected delirium during hospitalization
Estrangement from family
Constellation of laboratory findings such as
elevated mean corpuscular volume on CBC,
g-glutamyl transpeptidase

CBC = complete blood count.

Information from Alcoholism in the elderly. Council
on Scientific Affairs, American Medical Association. JAMA
1996;275:797-801.

Table 4

CAGE Questionnaire[*]

1. Have you ever felt you ought to Cut down on your drinking?
2. Have people Annoyed you by criticizing your drinking?
3. Have you ever felt bad or Guilty about your drinking?

4. Have you ever had a drink first thing in the morning to steady your nerves
or get rid of a hangover (Eye-opener)?

[*]--Two "yes" responses constitute a positive screening test.

Table 5

Role of Family Members

Seek medical attention for decline in patient's cognition or self-care.

Corroborate information on recent and lifetime drinking problems.

Participate if confrontation is needed.

Provide support during detoxification and chronic treatment.

Assist in coordination with community services at home.

Make decisions for older alcoholics with impaired cognition who are
unable to process information, weigh consequences or communicate
decisions.

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