Alcohol Misuse and Abuse Among the Geriatric Population: An Often Under-recognized Problem

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May 1, 2014

Outline

- Alcohol Definitions and Diagnosis
- Alcohol Physiology in Aging
- Alcohol and Medications
- Epidemiology
- Evaluating Alcohol Use in Older Adults
- Treating Alcohol Misuse and Abuse in Older Adults
Learning Objectives

1) Gain an appreciation for the frequency of alcohol use and misuse by older adults and the consequences of this behavior

1) Develop a strategy to evaluate alcohol use in your patients

2) Figure out where to start for treatment and resources
What’s a standard drink?

12 fl oz of regular beer = 8-9 fl oz of malt liquor (shown in a 12 oz glass) = 5 fl oz of table wine = 1.5 fl oz shot of 80-proof spirits ("hard liquor"—whiskey, gin, rum, vodka, tequila, etc.)

The percent of "pure" alcohol, expressed here as alcohol by volume (alc/vol), varies by beverage.

Definitions

- Alcohol Dependence/Abuse
  - DSM-IV Criteria
- Alcohol Use Disorder
  - DSM-V Criteria
- At-risk Drinking
- Heavy/Problem Drinking
- Binge Drinking
DSM-IV

- Substance Abuse – 1 or more
  - Failure to fulfill obligations
  - Physically hazardous situations
  - Social problems
  - Legal Problems

- Substance Dependence – 3 or more
  - Tolerance
  - Withdrawal
  - Larger amounts with time
  - Unsuccessful efforts to cut down
  - Time spent to obtain/use
  - Activities given up or reduced
  - Physical or psychological problems

DSM-V

- Alcohol Use Disorder
  - Combines dependence and abuse criteria from DSM-IV
    - Replaces legal problems with craving

  - Need at least 2 of 11 criteria
    - Mild = 2-3, moderate = 4-5, severe = 6 or more
At-risk and Heavy/Problem Drinking

- At-risk drinking
  - National Institute of Alcohol Abuse and Alcoholism (NIAAA)
    - > 1 drink/day
  - American Geriatrics Society
    - ≥ 2 drinks on a usual drinking day within the past 30 days

- Heavy or problem drinking
  - NIAAA
    - >7 drinks per week on average or > 3 drinks on any day

- Binge drinking
  - Defined as either 4 or 5 drinks at one time

Alarm Symptoms

- Use of alcohol as a palliative, self-medicating measure in response to hurt, losses or affective changes rather than as a socializing agent
  - Use of alcohol almost daily
  - Use outside of social setting
  - Use at home alone
Early versus Late Onset

- Early onset drinkers (2/3)
  - Before age 40 and longstanding
  - Psychiatric comorbidity is common

- Late onset drinkers (1/3)
  - After age 50
  - More likely to have begun or increased drinking in response to recent losses
  - More likely to appear psychologically and physically "healthy"

### Percentage Late Onset Drinking

Age of onset of drinking among alcoholics age ≥ 50
Clinical Characteristics of Early and Late Onset Problem Drinkers

<table>
<thead>
<tr>
<th>Variable</th>
<th>Early Onset</th>
<th>Late Onset</th>
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<tbody>
<tr>
<td>Gender</td>
<td>Higher proportion of men</td>
<td>Higher proportion of women</td>
</tr>
<tr>
<td>Socioeconomic status</td>
<td>Lower</td>
<td>Higher</td>
</tr>
<tr>
<td>Family history of alcoholism</td>
<td>More prevalent</td>
<td>Less prevalent</td>
</tr>
<tr>
<td>Alcohol-related chronic illness</td>
<td>More common</td>
<td>Less common</td>
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Epidemiology

- Any Alcohol Use
  - 65% of older adults

- 19-77/10k admissions for alcohol-related problems
  - Similar admission rate to myocardial infarction
Epidemiology Continued

- 2005-2007 National Surveys on Drug Use and Health (N=6,289 age >65 years)
  - 51% had normal alcohol use (6 or more drinks in 12 months)
    - 15.4% endorsed abuse or dependence symptoms
      - 12.0% subthreshold dependence, 1.3% dependence, 2.1% abuse

- 2005-2006 (N=4,236 age 65 and older)
  - 13% of men and 8% of women reported at-risk alcohol use
  - 14% of men and 3% of women reported binge drinking

An Unrecognized Issue

- Bias or preconceived ideas about older adults and alcohol
  - Failure to recognize symptoms

- Older adults are less likely to be diagnosed with alcohol abuse/dependence
  - n=417 patients
  - Housestaff diagnoses of alcohol dependence/abuse
    - 60% younger patient vs 37% older patients

- Self-referral
  - 37% of older adults needing referral for did not self-identify or seek services for substance abuse
And the problem is growing

- Heavier substance use among current young and middle aged cohorts will likely continue into later life thus expect higher use in this cohort as they age

- Number of older adults needing treatment will increase
  - 1.7 million → 2.2 million

  2000-2001 → 2020

Risk Factors

- Male gender
- Earlier life substance abuse
- Comorbid psychiatric disorders
- Family history of alcohol problems
- Loss
  - Death or separation
    - Spouse, family members, friends
  - Retirement
    - Income, social support, structure, self-esteem
Signs and Symptoms of Alcohol Problems in Older Adults

- Anxiety
- Blackouts, dizziness
- Depression
- Disorientation
- Mood swings
- Falls, bruises, burns
- Family problems
- Financial problems
- Headaches
- Legal difficulties
- Memory loss
- New problems in decision making
- Poor hygiene
- Seizures, idiopathic
- Sleep problems
- Social isolation
- Unusual response to medications
- Incontinence

Alcohol and Aging

- Physiology

- Co-morbid Illness
  - Older adults are more likely to be affected by at least one chronic illness

- Medications
Alcohol and Aging Physiology

- Decrease in total body water
- Decreased metabolism of alcohol in the GI tract
- Increased sensitivity or decreased tolerance to alcohol

Alcohol and Co-morbid Illness

- >1 drink per day
  - Pancreatitis
  - GI bleeding
- >2 drinks per day
  - Depression and anxiety
  - Insomnia
  - Falls
  - Gout
  - Cancer
  - Cognitive impairment/dementia
  - Uncontrolled Diabetes
Alcohol and Co-morbid Illness

- >3 drinks per day
- Cardiovascular risk
  - HTN, arrhythmia, MI and cardiomyopathy
  - Hemorrhagic CVA
- Additional consequences
  - Impaired immunity
  - Decreased bone density
  - Malnutrition

Alcohol and Medications

- Several studies have looked at the proportion of older adults taking alcohol interactive drugs
  - 25-38%

- 60% of older adults who abuse prescription medications have evidence of a concomitant alcohol use disorder
Common Interactions

- Enhanced sedation
  - Antidepressants, antihistamines, barbiturates, muscle relaxants, benzodiazepine, opioids
- Increased bleeding risk
  - NSAIDs, ASA
  - Anticoagulants
- Liver damage
  - Acetaminophen
  - Isoniazid

Less Obvious Medication Interactions

- Disulfiram like reaction
  - 2nd and 3rd generation cephalosporins
  - Bactrim
  - Metronidazole
  - Isoniazid
- Anti-hypertensives
  - Enhanced orthostatic hypotension with any agent
  - Beta-blockers less effective
  - Verapamil prolongs intoxication
- Anti-Diabetic
  - EtOH suppresses gluconeogenesis increasing risk for hypoglycemia
Benefits of Moderate Alcohol Use

- No long-term randomized trials
  - Observation or short-term looking at physiology

- Lowest mortality associated with one drink every other day
  - HR 0.7-0.9

Alcohol Consumption and Mortality Among Middle-aged and Elderly U.S. Adults

Cardiovascular Benefits and Risks

- Moderate consumption has been associated with reduced risk of CV mortality, MI and CAD
- CV disease is most common cause of death in populations studied

<table>
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<tr>
<th></th>
<th>CV Mortality RR</th>
<th>MI RR</th>
<th>HF RR</th>
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<tbody>
<tr>
<td>Moderate</td>
<td>0.6-0.8</td>
<td>0.6</td>
<td>0.5-0.6</td>
</tr>
<tr>
<td>Heavy/Binge</td>
<td>2.0</td>
<td>1.45</td>
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**Limited data on RR of HF, but percentage of dilated cardiomyopathy attributed to alcohol is 20-30%

Learning Objectives

1) Gain an appreciation for the frequency of alcohol use and misuse by older adults and the consequences of this behavior

1) Develop a strategy to evaluate alcohol use in your patients

2) Figure out where to start for treatment and resources
Mike

- 88yo with HTN, GERD and BPH
- Presents to VA Geriatrics Clinic for New Patient Appointment
  - Records reviewed and concern for EtOH dependence/abuse
  - Reports 1 alcoholic drink nightly and denies heavy use
- Admitted 4 times in last 2 years for hyponatremia
  - 1-2 glasses of wine daily
  - EtOH abuse/misuse/dependence not listed on any active problem list

Mike Continued

- 2 weeks later patient’s son calls and is concerned about his dad
  - Reveals 1 gallon every 1.5 weeks
- Returns to clinic to discuss
  - He would like to stop drinking
  - Strategy devised to slowly titrate him down and eventually off
### Screening

- **Goal**
  - Identify at-risk drinkers and those with alcohol use disorder
  - Identify those that need further assessment

- **Rationale**
  - Incidence is high enough to justify cost
  - Multiple adverse effects of problem drinking
  - Effective treatment available

- **Validated screening techniques**

- **Every person over age 60 should be screened**
  - Rescreen if certain physical symptoms are present or the patient undergoes a major life transition

### Screening tools

- **General population**
  - AUDIT
    - Most validated among general population

- **Geriatrics Specific**
  - Michigan Alcoholism Screening Test-Geriatric Version (MAST-G)
    - 24 questions
  - Short MAST-G
    - Modified to allow for self-administration
Validity

<table>
<thead>
<tr>
<th>Test</th>
<th>Score</th>
<th>Sensitivity</th>
<th>Specificity</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUDIT</td>
<td>≥ 8</td>
<td>90%</td>
<td>80%</td>
</tr>
<tr>
<td>MAST-G</td>
<td>≥ 5</td>
<td>69-91%</td>
<td>81-82%</td>
</tr>
<tr>
<td>SMAST-G</td>
<td>≥ 2</td>
<td>85%</td>
<td>97%</td>
</tr>
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MAST-G

1) When talking with others, do you ever underestimate how much you drink?
2) After a few drinks, have you sometimes not eaten or been able to skip a meal because you didn’t feel hungry?
3) Does having a few drinks help decrease your shakiness or tremors?
4) Does alcohol sometimes make it hard for you to remember parts of the day or night?
5) Do you usually take a drink to relax or calm you nerves?
MAST-G

6) Do you drink to take your mind off your problems

7) Have you ever increased your drinking after experiencing a loss in your life?

8) Has a doctor or nurse ever said that he or she was worried or concerned about your drinking?

9) Have you ever made rules to manage your drinking?

10) When you feel lonely, does having a drink help?

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Mary

- 81yo with COPD and h/o squamous cell lung CA presenting to Senior’s Clinic for a new patient appointment
- Tragic personal history
  - Orphaned at age 4 and suffered abuse from multiple caregivers
  - In an abusive marriage and victim of emotional abuse by her son

Mary Continued

- Started drinking in her 50s
  - Daily EtOH since then with either 3-4 12oz beers or 3-4oz Vodka
- Transitioned to temazepam during recent hospital stay, now off all EtOH and living with her daughter
Treatment

- Brief Interventions and Treatments
- Medications
- Referral to specialty services

Brief Interventions/Treatments

- Brief Interventions
  - Screening followed by 1-5 sessions
  - Advice, education and motivation interviewing often using a workbook
  - Action oriented
- Brief Treatments
  - Generally 6-20 sessions
  - Focused on changing attitudes and behaviors
Studies on Brief Interventions

- Project Guiding Older Adult Lifestyles (GOAL)

- Staying Healthy Project

- Health Living as you Age Study

Project GOAL

- 24 community based primary care practices in Wisconsin
  - n=146 (intervention 87, control 71)
  - Two 10-15min MD delivered counseling sessions using scripted workbook

- Results
  - 34% reduction in 7-day alcohol use
  - 74% reduction in mean number of binge drinking episodes
  - 62% reduction in percentage of patients drinking more than 21 drinks per week
  - Results remained significant at 3, 6 and 12 months.
Staying Healthy Project

- Community based setting
- N=164 (intervention 74, control 90)
- Single structured brief 20-30min session
  - social workers, resident and service coordinators, activity directors and nurses
- Results
  - Both control and intervention groups decreased drinking
  - 40% reduction (20 to 12) in drinks/week in intervention group (not statistically significant)
  - 30% reduction in control group

Healthy Living as you Age Study

- N=631 (310 intervention, 321 control)
- Primary Care Setting
- Personalized feedback report about risks of alcohol use, a booklet about alcohol and aging, advice from physicians to reduce risks and up to 3 telephone calls from health educator
- Results
  - 19.7% of intervention did not complete any calls
  - Those that received all 3 calls were more likely to be “not at risk” at 3 months (OR 5.31)
    - Not maintained at 12 months.
Studies on Brief Treatment

- The Gerontology Alcohol Project

- GET SMART

The Gerontology Alcohol Project

- Uncontrolled, late onset drinkers only, N=48
- 4 modules
  - Analysis of drinking behavior
  - Self management in high risk situations
  - Alcohol information and education
  - General problem solving skills
- 24 reached drinking goal at discharge
  - 17 abstinence, 7 limited drinking
- 17 maintained drinking goal at 12 months
  - Subset of 21 with complete follow-up had significant reduction in median alcohol consumption
GET SMART

- Outpatient program for older adult substance abuse
- 16 sessions of cognitive behavior and self management approaches
- 49 patients completed the program, 61 dropped out
  - Those that completed the program had much higher rates of abstinence

Florida - BRITE

- Florida Brief Intervention and Treatment for Elder’s Project
  - Modeled after SBIRT
  - Hospitals, trauma centers, health clinics and aging service sites
  - 3497 screened, 9.7% referred for

Prescreen  Screen  Brief Intervention or Treatment  ➞  ➞
Florida-BRITE Results

- SMAST-G scores significantly decreased and were maintained at 30 days
  - Baseline to discharge
    - 3.1 to 1.7 ($p < .001$)
  - Baseline to discharge to 30 day follow-up
    - 2.7 to 1.0 to 0.9 ($p < .001$)
  - Only 18.9% of those that screened positive initially remained so at discharge and follow-up

Examples of Workbook Steps

- Identifying future goals
  - “What are some of your goals for the next 3 months to a year, regarding your physical and emotional health?”

- Reasons for drinking and reasons to cut down or quit drinking
  - “We’ve spent some time talking about your blood pressure problems, the fall you took in the bathroom and your loneliness…I am concerned that your drinking could be making these problems worse. Our goal is to keep you independent and have a good quality of life.”

- Drinking agreement in the form of a “prescription”
Medications

- Naltrexone
- Acamprosate
- Disulfiram
- Benzodiazepines

- Medication therapy are only effective in combination with counseling/therapy

Naltraxone

- Opioid antagonist
- Effective at reducing craving, reduction in heavy drinking and relapse rates
  - Most studies exclude those >65
  - Single RCT in veterans >50, n=44, safe and effective
- 3 days of abstinence before initiation
- Starting dose 50mg/day
  - 12.5-25mg/day for those at risk of adverse events
- 3-12 month duration
- Safety
  - Nausea
  - Liver toxicity
Acamprosate

- Incompletely understood mechanism of action
  - GABA agonist and NMDA antagonist
- Efficacy for reduced drinking day, increased complete abstinence and lengthening time to relapse
  - Mean age for most studies ≈ 40
- 5 days of abstinence before initiation
- 666mg TID
  - Contraindicated in severe renal impairment
- Safety
  - Very well tolerated
  - Can be used in liver disease and with both opioids and benzos
  - Diarrhea

Disulfiram

- Alcohol aversive/sensitizing agent
- Single large VA study showed efficacy with reduction in drinking days
  - Not in maintaining abstinence or time to first drink
  - Mean age 41
- 12 hours of abstinence before initiation
- 250mg/day for 1-2 weeks
  - Adjust down for sedation
- Safety
  - Avoid in cardiovascular disease
  - Hepatic toxicity
Subspecialty Referral – The Ideal

- More intensive treatment recommended for subset of patients or patients who fail BI/BT
  - Lack of social support and mental health comorbidities
  - Location of treatment complicated by functional and medical complexity
- Detoxification
  - No data in older adults

Rehabilitation

- Outpatient Rehabilitation
  - Vary greatly
- Inpatient Rehabilitation
  - Not readily available
  - Frail, acutely suicidal or medically unstable
  - Is covered by Medicare up to 190 days
- Residential Rehabilitation
  - Slower paced, more repetitive, in specialized care setting
    - Group homes, board and care facilities
    - May be specialized for cognitive impairment and chronic illness
    - Lack of social resources and limited mobility
Outpatient Rehabilitation

- Cognitive Behavior Therapy
  - N=229, randomized not controlled, 20 sessions in 18wks
  - Reduced percent heavy drinking days and increased percent days abstinent at 6 months

- Day hospital and traditional outpatient treatment
  - N=1204, HMO members, all ages
  - 8 week treatment with 1 year aftercare
  - Older cohort with increased abstinence and decreased drinking at 5-years
  - When compared to younger adults, older adults have similar response rates to treatment in multiple studies

Inpatient Rehabilitation

- 4 Observational studies
  - 50-65% of patients abstinent at 1-4 years

- VA study with matched middle-aged and younger cohorts
  - All groups saw reductions in alcohol intake and in psychological symptoms
  - At 1 and 5 year follow-up older cohort had lower drinking rates and fewer drinking problems compared to other cohorts
Resources – The Reality

- There are very few resources
  - Intensive options often not available due to function and medical complexity of our patients

- Aurora Mental Health
  - [http://www.aumhc.org/adult-services.html](http://www.aumhc.org/adult-services.html)
  - Older Adult Services
  - Adult Intensive Services
  - Residential Services

Resources Continued

- West Pines Behavior Health
  - [http://www.westpinesrecovery.org/overviewcd/](http://www.westpinesrecovery.org/overviewcd/)
  - Detoxification
  - Residential Treatment Center
  - Intensive Outpatient Program
  - Aftercare
  - Excepts Medicare but mixed-age
Resources Continued

- Porter Adventist Hospital Behavioral Health
  - [http://www.porterhospital.org/behavioralhealth](http://www.porterhospital.org/behavioralhealth)
  - Chemical Dependency-Intensive Outpatient Program
  - Accepts Medicare but mixed age program
- Community psychiatry, psychology and counseling
  - Not specific to alcohol treatment
- Alcoholics Anonymous
  - [http://www.daccaa.org](http://www.daccaa.org)
  - 12-steps
  - Mixed age
- Al anon

Take Home Points

- At-risk drinking and problem drinking are common in older adults and often difficult to recognize
  - You may not recognize the problem if you don't ask
- Screening is effective and useful
  - SMAST-G is simple and easy to administer in clinic
- Even brief counseling in clinic can be effective to reduce alcohol consumption in our patient population
References


- Brief Interventions and Brief Therapies for Substance Abuse. Center for Substance Abuse Treatment. Rockville (MD): Substance Abuse and Mental Health Services Administration (US); 1999. (Treatment Improvement Protocol (TIP) Series, No. 34.)


- Incorporating Alcohol Pharmacotherapies Into Medical Practice. Center for Substance Abuse Treatment. Rockville (MD): Substance Abuse and Mental Health Services Administration (US); 2009. (Treatment Improvement Protocol (TIP) Series, No. 49.)


References Continued


References Continued

- Substance Abuse Among Older Adults. Center for Substance Abuse Treatment. Rockville (MD): Substance Abuse and Mental Health Services Administration (US); 1998. (Treatment Improvement Protocol (TIP) Series, No. 26.)
Questions?