Update on Diagnosis, Assessment and Treatment of Alcohol Use Disorders

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Disclosure Information

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Why Alcohol?

Isn't it all about opioids these days?

Alcohol use and burden for 195 countries and territories, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016 Lancet, 2018

- Alcohol is a leading cause of disability and death
- "Moderate drinking" confers health benefits?
- Population study showed:
  - No amount of alcohol consumption was associated with reduced disease burden
  - Increased disability with all amounts of alcohol consumptions
  - Cancers

A comparison of gender-linked population cancer risks between alcohol and tobacco: how many cigarettes are there in a bottle of wine? Hydes, et al BMC Public Health March 2019

- Alcohol and tobacco risks were evaluated for cancer deaths
- 1 bottle of wine a week is associated with:
  - 1% increased absolute cancer risk in men
  - 1.4% increased absolute cancer risk in women
- This is like smoking 8-10 cigarettes a week
- Wine was not shown to DECREASE cancer risk

Alcohol use in opioid agonist treatment Seonaid et al. Addict Sci Clin Pract 2016

- 1/3 of PT treated with OAT misuse alcohol
- Often undiagnosed→ untreated
- Independent risk factor for overdose

BRIEF REVIEW

Basic Science of Alcohol Use

- Positive and negative reinforcements
  - Rewarding effects of alcohol
    - Seek pleasure
    - Mediated by DA, 5HT, GABA, endocannabinoids
  - Negative reinforcing effects of alcohol
    - Escape pain
    - Mediated by CRF, glutamate, down regulating GABA

"Brain Seeks Balance"

- Long term exposure produces adaptive changes with GABA and glutamate
- Abrupt cessation of alcohol causes characteristic symptoms of overactive glutaminergic system

EXTENT OF THE PROBLEM

- ALCOHOL IS A TOXIN-no amount is safe
- Leading cause of preventable death worldwide
- US-55% age 26+ consumed in past month
- US-25% age 26+ "binge drink" (>4/>5)
- 5th leading cause of premature death and disability; annual cost-$249 billion
- Prevalence of AUD doubled from 2002→2013

LOOK AT THIS CULTURALLY

- TV –(Meredith Grey should have cirrhosis)
- Entertainment
- Movies
- Social Events
- College Campuses
- High Schools

BUT…NOT "EVERYONE" DRINKS!

- 9% drink more than daily and weekly limits, probably meeting criteria for moderate-severe AUD
- 19% either exceed daily OR weekly limits
- 37% ALWAYS drink within low-risk limits AND
- 35% NEVER DRINK ALCOHOL!

WHO IS HARMED??

- Primarily those with AUD
  - 1/3 adults will meet this criteria at some point
  - 15.1 million adults met criteria in past 12 months
- Public health impacts
  - Accidents
  - Crime
  - Lost work productivity
  - Violence
- ANALYSES THAT TAKE INTO ACCOUNT ALL HARM SHOW ALCOHOL IS MOST HARMFUL

Injuries and Alcohol Use

- 33% of MVA's in 2016
  - 40% of fatalities were not the impaired driver
- 32% of homicides
- 31% of unintentional injuries
  - Falls, burns, frostbite, drownings, gunshots
- 23% of suicides

Mortality AFTER treatment for OUD

51% from tobacco-related causes

34% from alcohol-related causes

"DEATHS OF DESPAIR"

- Case and Deaton's 2015 paper
- Mortality among middle aged white men declining
- Part of triad is alcohol related cirrhosis
- Can add alcohol to increased risk of suicide as well

Prevalence of Fetal Alcohol Spectrum Disorders in 4 US Communities Higher Than Expected May et al JAMA 2018

- Reported prevalence of FASD is 10 per 1000 live births
- Cross sectional designed study evaluated 1st graders in 4 diverse communities for stigma of FASD
- Found prevalence was 1.1-5% using conservative estimates

"REAL COST" OF SUBSTANCE USE

	HEALTH CARE	OVERALL
TOBACCO	$130 BILLION	$295 BILLION
ALCOHOL	$25 BILLION	$224 BILLION
ILLICIT DRUGS	$11 BILLION	$193 BILLION

Alcohol makes it all worse…

Alcohol	Illicit Drug Use (%)
None	4
Some	7
Heavy	34

Alcohol	Smoking (%)
None	16
Some	16
Heavy	53

So how do we find identify?

"Single" Question

"Do you sometimes drink beer, wine, or other alcoholic beverages?"

(and)

"How many times in the past year did you have more than 4/5 drinks in one day?"

82% sensitive and 79% specific

Two Item Test

- "In the past year, have you been under the influence in situations where you could have caused an accident or been hurt?"
- "Have there been incidents where you had more to drink than you intended to have?"
- 77-95% sensitivity if two positive responses
- 62-82% specificity if two positive responses

AUDIT-C

Alcohol Use Disorders Identification Test-Consumption

- Requires scoring
- 3+ for women, 4+ for men (7+ suggests severe)
- 86% sensitivity, 90% specificity
- Includes:
  - How often?
  - How many typically?
  - How often >4/5?

Alcohol Use Disorder

- 2+ criteria in past 12 months
- 2-3 Mild 4-5 Moderate 6+ Severe
- We all know the criteria….Asking the questions is an art (and substance specific)

Examples of questions?

Larger/Longer:

Cut Down:

Risk:

Tolerance:

Cravings:

Withdrawal:

Time:

Relationships:

Work/School/Home:

Knowledge:

Social/Recreation:

SBIRT

- Always the correct answer on the certification exam!
- Modest efficacy in reducing self reported alcohol use
- No effect with adolescents, persons with co-existing SUD
- BUT…..repeat and be ready when people are ready for intervention!

Alcohol Pharmacotherapy

- Alcohol Withdrawal Management
- Medications to treat Alcohol Use Disorder

Alcohol Withdrawal Management

- Focus on outpatient today
- Need to know who is outpatient candidate!
- Use:
  - History
  - AUDIT-PC
  - PAWSS

Who has withdrawal SX?

- 50% of those with moderate to severe AUD will experience withdrawal symptoms
- Develops within 6-24 hours after last drink, often while BAC is still positive
- If >24 hours since last drink and no SX=no medications needed
- If very mild symptoms, no medications unless progresses

History

- Confirmation of alcohol use disorder diagnosis
- Duration of disorder?
- When was your last drink?
- How many drinks per day, and days per week?
- History of withdrawal seizure or delirium tremens
- Medical complications related to alcohol
- Number of prior supervised withdrawal episodes?

Labs and Vitals

- CBC
- LFT's
- CHEM Panel
- Ca, Mg, PO_4

CIWA-Ar

Nausea/Vomiting

Tremors

Sweats

Anxiety

Tactile Disturbances

Agitation

Auditory Hallucinations

Visual Hallucinations

Headache

Orientation/Sensorium

0-9 Very Mild

10-15 Mild

16-20 Moderate

21-67 Severe

Trouble with CIWA-Ar

- Length
- Primarily studied in non-medically complex patients
- Great intervariablity items in subjective scoring

SAWS-Short Alcohol Withdrawal Scale

Anxious?

Feeling Confused?

Restless?

Miserable?

Problems with memory?

Tremors/shakes?

Nausea?

Head pounding?

Sleep disturbances?

Sweating?

Score 0-3 for each; <12-mild; >12 moderate-severe

PAWSS-Predictor of Alcohol Withdrawal Severity Scale

- Also can be used to assess candidates for outpatient management
- Initially validated on inpatients

Criteria for Ambulatory Management

- CIWA-Ar <15, SAWS <12
- No history of seizures, delirium tremens
- Motivated, able to self administer medications
- Able to return for follow up care frequently
- Not likely to combine alcohol with medications
- Good support system
- Normal labs, absence of unstable co-morbid medical/psychiatric illnesses

Contraindications for Ambulatory Management

- Pregnancy
- Marked abnormal labs
- Drenching sweats, disorientation, severe tachycardia
- Hypertension
- Benzodiazepine use disorder
- Co-morbid medical or psychiatric concerns

ASAM Criteria

- Always important in determine level of care
- Predicts not only management of withdrawal but ongoing treatment

Ambulatory Management

- Should check in daily for five days after last drink
- Use validated instrument to assess for worsening withdrawal symptoms
- Measuring BAC (if possible) is a useful tool at early follow up
- Support is critical
- Understanding that transfer to a higher level of care may be necessary

BZP for Withdrawal Management

- More literature, predictable
- Can use symptom triggered or scheduled
- Patient or family member can administer SAWS
- Also can be assessed over phone vs. daily clinic visits
- Consider daily prescriptions to reduce risk of misuse

- If sub-adequate response, consider adding adjunctive medication such as anticonvulsant.
  - Gabapentin, carbamazepine, VPA
- Stop benzodiazepines as soon as withdrawal symptoms resolve
- Anticonvulsants can be used as monotherapy
  - Gabapentin is preferred if it will be considered for ongoing use to treat AUD
  - Carbamazepine also can be used as monotherapy

- Alpha 2 adrenergic blockers can be added to treat autonomic hyperactivity
- Beta adrenergic blockers can be used to control hypertension and tachycardia
- The above only treat symptoms, not reduce the risk of seizures
- There is no evidence to support the use of baclofen to treat alcohol withdrawal

Dosage

- Long acting=self taper
- In absence of liver disease, advanced age, delirium (usually inpatient management)

Chlordiazepoxide	Gabapentin
Day 1: 50 mg QID	300 mg QID
Day 2: 25 mg QID	300 mg TID
Day 3: 25 mg BID	300 mg BID
Day 4: 25 mg QHS	300 mg QD

Add thiamine 1 mg QD

"If anyone leaves my office meeting criteria for a tobacco, opioid, or alcohol use disorder and I don't discuss and offer pharmacotherapy, I have committed malpractice…"

Tim Kelly, 2011

We don't do a good job…

- <1 out of 10 who meet criteria receive ANY treatment!
- Even fewer receive evidence-based treatment, e.g., 674,000 prescriptions for FDA approved psychopharmacological treatments were written in 2010 (Mark et al. 2015) vs. an estimated 15 million individuals with AUD (Hasin et al. 2017)

Therapy is helpful but…

- 70% of those managed without evidence-based medications return to drinking within 6 months
- Exception is those diagnosed with mild AUD-may respond first to evidence-based psychotherapy interventions.

The trick is identifying…

- Not everyone walks in and says "I have a drinking problem…"
- Minimization is a component of partially treated SUD
- Alcohol use should be in differential diagnosis for many psychiatric, physical and behavioral chief complaints
- Make it OK for our patients to disclose
- Discharge paperwork from the ED, inpatient psychiatric stay, or jail is NOT how to diagnose!

Psychosocial Interventions

- Almost always improve outcomes
- Should never be requirement to continue medical interventions
- Not all EBP's are delivered to fidelity
- Know who is running your groups, your individual therapist, what the barriers are
- Be familiar to the merits of specific EBPs, be able to discuss progress, praise for progress

Medications (well, the FDA approved ones)

- First line: Naltrexone
  - Can be started without abstinence
  - Requires one pill a day or monthly injection
  - Primary reduces risk of return to heavy drinking
  - Contraindicated:
    - LFT's 3-5X elevation
    - Acute hepatitis or liver failure
    - Concurrent treatment with OAT for OUD

- Acamprosate
  - Dose-666mg TID (6 pills daily)
  - Renal metabolism
  - Start after abstinence is achieved
  - Most helpful in promoting abstinence and preventing future drinking
  - Primary AE-diarrhea
- Disulfiram
  - Dose-250-500 mg QD
  - Still used in some alcohol deterrent programs (coercion based)
  - Debate over wisdom of using aversant medication in population with diagnosis characterized by inability to weigh risks

Topiramate

- Decreases positive reinforcing impact of alcohol
- Suppress the learned behaviors associated with alcoholic cravings
- Adverse effects: renal calculi, diaphoresis, congenital defects
- Minor AE include weight loss, taste disturbances

Jefee-Balhoul, et al, JAM 2019

- First trials:
  - Titrated from 25 mg/day to 400 mg/day
  - Showed-
    - Fewer drinking days
    - Fewer drinks/drinking days
    - Fewer heavy drinking days (>4, >5)
    - Higher percentage of abstinent patients
    - Reduction in GGT
    - More "safe" drinking days (<1, <2)
- Limitations:
  - Few studies
  - Impressive short-term effects but long term?

Gabapentin (what doesn't it do?)

- Also has been shown to reduce heavy drinking days
- Dose is usually 600 TID
- APA included it in its guidelines as secondary medication
- **Abuse potential with OAT**

Ongoing Monitoring

- Urine Testing
- BAC
- Serum Biomarkers
  - CDT
  - GGT

Is alcohol use OK with OAT?

- Actual pharmacokinetics are poorly studied in humans
- Agreed that both can cause sedation and effect is synergistic
- Induction phase is highest risk for overdose with alcohol administration

"It was a beer with dinner.."

- Most studies examine at risk alcohol use
- No quantitative objective assessment
- Address as we do with BZP?
- BUT ADDRESS!!