

ASAM REVIEW COURSE 2023

Medical Co-Morbidities: Diagnosis, Prevention and Complications

Carolyn Warner-Greer, MD, MSc, FASAM Medical Director Bowen Center Fort Wayne, IN





Financial Disclosure

Carolyn Warner-Greer, MD, MSc, FASAM

• No relevant disclosures

Learning Objectives



1

Conduct an appropriate history and physical exam for persons with substance use disorder.

Identify key medical co-morbidities that can occur with substance use disorder.

2

Presentation Outline

Routine and Preventive Care

- History
- Physical examination
- Labs
- Preventative Care
- Preconception Care

Medical Consequences of Alcohol and Drug Use

- Alcohol
- Tobacco
- Opioids
- Stimulants
- Injection Drug Use
- Cannabis



SUD = Poor Medical Care

- Reasons
- Barriers
- Consequences



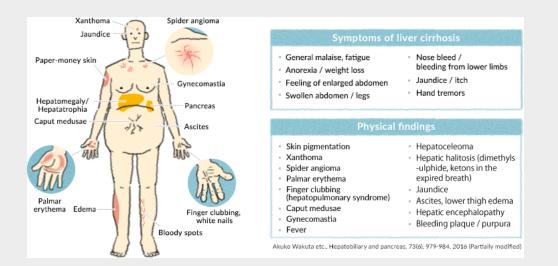
Chan Carusone, S., Guta, A., Robinson, S. et al. "Maybe if I stop the drugs, then maybe they'd care?"—hospital care experiences of people who use drugs. Harm Reduct J 16, 16 (2019).

General Medical Evaluation

- Medical History
- Physical Examination
- Tests
- Preventative Counseling
- Preventative Screening
- Immunizations



- Affects every organ system
- Women>>Men
- Is any ETOH safe?
- Physical Exam Findings:



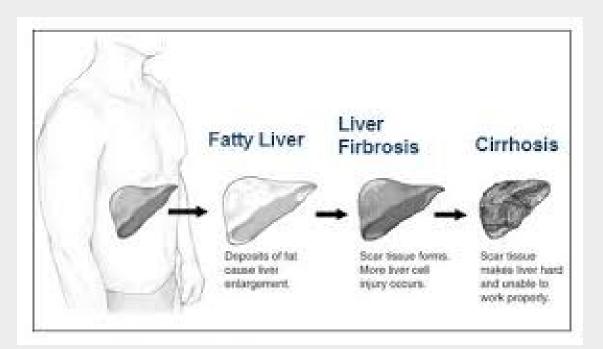
- Spider angiomas
- Palmar Erythema

- Jaundice
- Ascites



• G|-

- Esophagitis/gastritis, Mallory-Weiss tears, esophageal varices
- Pancreatitis (dose-related toxic effect)
- Alcohol-related liver disease
 - AST/ALT >2
 - Fatty liver
 - Alcohol related hepatitis (ALH)
 - Cirrhosis-10-20%





- Respiratory
 - Aspiration
 - OSA
- Infectious
 - Hepatitis
 - SBP
 - TB
- Nutrition-vitamin and mineral deficiencies
 - B1, B6, riboflavin, niacin, Vit D, Mg2+, Ca2+, folate, PO4, zinc



- CV
 - HTN-dose dependent
 - Cardiomyopathy-dilated
 - Atrial Fibrillation "Holiday Heart"
- Heme/Oncology
 - Anemia-macrocytic
 - Thrombocytopenia/pancytopenia
 - Coagulopathy
 - Increase CA: breast, oral, GI, hepatic (no safe threshold)



Zhao J, Stockwell T, Naimi T, Churchill S, Clay J, Sherk A. Association Between Daily Alcohol Intake and Risk of All-Cause Mortality: A Systematic Review and Meta-analyses. JAMA Netw Open. 2023;6(3)

- Neurological
 - Neuropathyperipheral/autonomic
 - Sleep
 - Cognition
 - Cerebellar dysfunction
 - Trauma

Wernicke Encephalopathy	Korsakoff's Syndrome
C-Confusion	R-Retrograde amnesia
O-Ophthalmoplegia	A-Anterograde amnesia
A-Ataxia	C-Confabulation
T-Thiamine Deficiency	K-Korsakoff psychosis



- Endocrine
 - Hypogonadism
 - Direct testicular effect
 - Hepatic dysfunction \rightarrow reduction in gonadal hormones
 - Decreased fertility
 - Hyperlipidemia



Tobacco

- Leading cause of preventable death
- CV
 - HTN
 - CAD (multifactorial)
 - Peripheral vascular disease
- GI
 - GERD/PUD
 - Pancreatitis
 - Inflammatory Bowel Disease
 - Malignancy



Tobacco

- Respiratory
 - COPD
 - Malignancy
 - Asthma
 - PTX
 - Pulmonary HTN
 - Pneumonia/bronchitis



Tobacco

- Heme/Onc
 - 49% of cancer deaths related to tobacco use
 - Oral, gastric, lung, breast, cervical, bladder, kidney
 - DVT/PE
- Neurological
- Infectious Disease
- Reproductive/Endocrinology
 - Grave's Disease/hypothyroidism
 - Erectile Dysfunction/infertility







Tobacco Cessation and Recovery?

- Continued tobacco use predicted return to all substance use
- Should residential treatment programs allow nicotine use?
- Will patients leave prematurely?
- Philadelphia and NY experiences



Weinberger AH, Platt J, Esan H, Galea S, Erlich D, Goodwin RD. Cigarette Smoking Is Associated With Increased Risk of Substance Use Disorder Relapse: A Nationally Representative, Prospective Longitudinal Investigation. J Clin Psychiatry. 2017 Feb;78(2):e152-e160.

Opioids

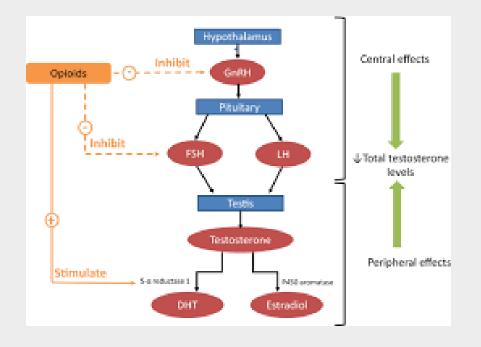
• ID

- IVDA-endocarditis, osteomyelitis, Hep C and HIV
- STD
- Respiratory-overdose, chest wall rigidity with FENT, pulmonary edema
- Endocrine-reduction in steroid hormones
- Trauma-rhabdomyolysis, compartment syndrome
- Respiratory-OSA,
- GI-constipation



Opioid Induced Hypogonadism

- Low libido
- Muscle wasting
- Increased adiposity
- Depression
- Osteoporosis
- Treatment: Testosterone replacement





Mayo Clinic Proceedings: Innovations, Quality & Outcomes, ISSN: 2542-4548, Vol: 3, Issue: 3, Page: 276-284

QT Prolongation

- Normal: <430 ms-men, <450 ms-women
- Medications: methadone, quinolones, ondansetron, macrolides, hydroxyzine, citalopram
- J Mg2+, K+, Ca2+
- Screening:
 - Good family and medical history-look at all medicines
 - EKG at higher doses of methadone?
- Flockhart Table/APP-IUSOM



Treece JM, Al Madani M, El Khoury G, Khraisha O, Martin JE, Baumrucker SJ, et al. Comprehensive review on methadone induced QT prolongation and torsades. J Pharmacol Pharmacother 2018;9:66-7511-12-2017 R

Risk Factors for TdP

A CARLAT PSYCHIATRY REFERENCE TABLE

Risk Factors for Torsades de Pointes		
Nonmodifiable	Modifiable	
Female sex	Multiple QT-prolonging medications	
Older age	Drug toxicity	
Structural or functional heart disease	Drug-drug interactions	
Congenital long-QT syndrome	Severe acute illness	
Personal history of drug-induced QT prolon- gation	Bradycardia	
Family history of sudden (or aborted) cardiac death	Hypokalemia, hypomagnesemia, hypocalcemia	
Poor metabolizer at CYP enzymes	Hepatic or renal impairment	

Adapted from Funk MC et al, Am J Psychiatry 2020;177(3):273-274

From the Article: "Cardiovascular Psychiatry Part 1" with Margo C. Funk, MD, MA, FACLP The Carlat Psychiatry Report, Volume 21, Number 4&5, April/May 2023 www.thecarlatreport.com



LFT's and Naltrexone

- Indication OUD/AUD-baseline higher risk of hepatic disease
- No need to check LFT's prior to initiating treatment
- HCV, HBV not a contraindication
- Elevated LFT's no greater than placebo



Springer, Sandra A., "Monitoring of Liver Function Tests in Patients Receiving Naltrexone or Extended-Release Naltrexone," PCSS clinical guidelines, Update 2022

Stimulants

- CNS
 - CVA-5X increased risk hemorrhagic (METH), also ischemic (COC)
 - No evidence cocaine associated with seizures
- CV
 - [1]
 - HTN
 - Aortic dissection
 - Ventricular arrhythmia
 - Supportive treatment: β 1blocker not associated with unopposed α activity
- GI
 - Ischemic bowel
 - Colitis



Arenas DJ, Beltran S, Zhou S, Goldberg LR. Cocaine, cardiomyopathy, and heart failure: a systematic review and meta-analysis. Sci Rep. 2020 Nov 13;10(1):19795

Do I get an EKG prior to starting a prescribed stimulant?

- Kids, young adults-no
 - Low pretest probability
 - Look at EKG if one is available
- Older Adults-poor data
 - Risk of RX stimulants is hypertension, tachycardia, vasospasm
 - BP and HR every 6 months
 - EKG annually? Look for QRS widening, ventricular conduction delay, arrythymia



Stimulants

Toxicity	Emergency Presentation	Cause of Death
VASCULAR	Cardiac, stroke	Cardio/cerebrovascular
PSYCHIATRIC	Trauma, psychosis	Traumatic



Medical Complications of IVDU

• HIV

- PWID=10% of new HIV cases since 2012
- Reduction:
 - SSP-reduction in HIV by 50%
 - PrEP, overdose prevention sites
- Hepatitis
 - 65% PWID-->anti HCV +
 - SSP, MOUD-reduction in HCV
 - DAA regardless of stage of recovery
 - IVDU most common risk factor for new HBV



Levitt A, Mermin J, Jones CM, See I, Butler JC. Infectious Diseases and Injection Drug Use: Public Health Burden and Response. J Infect Dis. 2020 Sep 2;222(Suppl 5)

PrEP

- Public Health Goal: reduce new HIV infections by 75% by 2025 and 90% by 2030
- CDC, FDA endorse PrEP as effective strategy to reduce new HIV infections among PWID
- Fewer than 1/500 PWID filled RX for PrEP
- LAI forms of PrEP on horizon?



Streed CG, Morgan JR, Gai MJ, Larochelle MR, Paasche-Orlow MK, Taylor JL. Prevalence of HIV Preexposure Prophylaxis Prescribing Among Persons With Commercial Insurance and Likely Injection Drug Use. JAMA Netw Open. 2022;5(7):e2221346

Medical Complications of IVDU

- SBI
 - Osteomyelitis
 - Endocarditis
 - S. aureus (often methicillin resistant)
 - Osler nodes, Roth spots, splinter hemorrhages

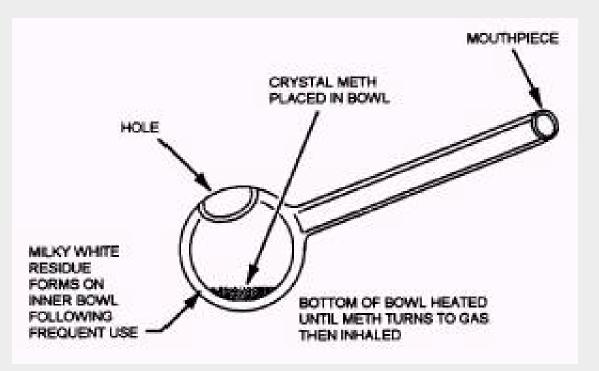
Substance Use History Surgeons' Limitations on Proportion (%) of surgeons who would Surveyed U.S. cardiac surgeons No. of Operations in case of operate given patient's characteristics (208 Respondents) **Recurrent Infection** Would not limit number 85.6% male Native valve non-Native valve IDU-IE 73.1% surgeries for non-IDU-IE + methadone Rx **IDU-IE** 83.5% Would limit number of surgeries for IDU-IE P<0.001 67.8% non-Hispanic White 63.0% 64.5% Participants from across US regions Have declined operating on 63.5% patient(s) with IDU-IE P < 0.001 Recurrent non-IDU Recurrent Less likely to report operating for primary **IDU-IE** & recurrent infection in patients with 93.1% 26.4% IDUJE engagement in methadone treatment may increase favoring operation IDU IE: injection drug use-associated infective endocardit Max Jordan Nguemeni Tiako, 2MS; Reed Mszar, 2BS; Cornell Brooks, II 2BS; Syed Usman Bin Mahmood, 3 MBBS; Makoto Mori, 3 MD; Prashanth Vallabhajosyula, MD, MS; Arnar Geirsson, 3 MD; Melissa Weimer, 4 DO, MCR ale University School of Medicine, New Haven, CT, Pale University School of Public Health, New Haven, CT, PSection of Cardiac Surgery, Department of Surgery, Yale University School o Addicine, New Haven, CT, Section of General Internal Medicine, Department of Internal Medicine, Yale University School of Medic

Cardiac Surgeons' Treatment Approaches for Infective Endocarditis Based on Patients'

Seminars in Thoracic and Cardiovascular Surgery, ISSN: 1043-0679, Vol: 33, Issue: 3, Page: 703-709 2021

Medical Complications of Inhaling Drugs

- Inhalation and insufflation
- Shared equipment-->risks of ID
- Poor adherence to barriers during SI
- Trauma-burns, cuts
- Harm reduction





Best Practices Recommendations for Canadian Harm Reduction Programs-CATIE, 2020

Cannabis

- Hyperemesis Syndrome
 - Downregulation of CNS CBD R and upregulation of gut CBD R
 - Chronic cannabis use
 - Relieved with hot showers
 - Resolved with cessation
- Medical Cannabis
 - Medical condition with RCT suggests responds to THC
 - Symptoms refractory to pharmacotherapy
 - No SUD/psychological morbidity

Hill KP. Medical Marijuana for Treatment of Chronic Pain and Other Medical and Psychiatric Problems: A Clinical Review. JAMA. 2015;313(24):2474–2483.

Conclusion

- Targeted history and physical exam
- Physical health
- Teach patients to advocate for themselves
- Tobacco and alcohol most toxic substances
- Partnership with primary care colleagues





Get in Touch

