Current Controversies and Considerations in the Management of Co-Morbid ADHD and Addiction

CentraCare Collaborative Care Conference

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Treatment of ADHD Comorbid with SUD's

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Diagnosis of ADHD

- It is important to understand that ADHD is a real illness with associated morbidity
- ADHD is relatively common in adults-3-7%
- Rates are much higher in patients with SUD's, probably closer to 15%
- Many studies have shown increased risks of unemployment, accidents, mortality and impaired relationships.

Can ADHD Be Easily Diagnosed in an Adult?

- Many providers use “checklists” and does a positive response mean ADHD
- Inattention has many causes including PTSD, poor sleep or stress or even an active SUD
- No simple Diagnostic Test
- Criteria easily found on internet and social media, and in a way has become a “Popular” thing to have

Adult ADHD: Is it Something Else?

- Rates of ADHD persisting into Adulthood are somewhere between 5-20%
- Three Cohort studies between 2015-2019 attempted to clarify what patients had if diagnosed after the age of 12
- One study found SUD in 55%, the other two studies found other diagnosis in all but 1-2 percent of patients being evaluated for ADHD

Adult ADHD: Is it Something Else?

- One pretty significant take away from these studies was that if a patient did not have a childhood diagnosis, or history suggesting ADHD as a child, it is likely you are treating something else.

ADHD DIAGNOSIS: There is More

- People often exaggerate symptoms (Not just when being seen for attention issues) and in the case of ADHD evaluations, up to 22%
- There is clearly evidence that people prep for evaluations to obtain stimulants
- Studies have shown undergrads can be coached to meet criteria

ADHD Treatment: Why Should We Care Well, There Are Some Risks!

- Medical risks include HTN, tachycardia, weight loss, sleep issues, tics, arrythmias, stroke
- Mental Health risks include psychosis, mania, OD
- Community risk of diversion
- Addiction risk of developing Stimulant use disorder or re-igniting a previous Stimulant use disorder

Pharmacologic Treatment: Conflict of Interest

- Many ADHD researchers received funding from pharmaceutical companies which has caused some concern, including the 2016 Cochrane review on adult methyphenidate use, which was retracted due to COI's
- Pharmaceutical companies have also helped fund advocacy groups
- Marketing to Physicians has been extensive

If We Choose to Treat, What are we hoping for?

- Improved relationships
- Decreased accidents
- Employment stability
- Decreased Substance use

Can We Measure Success?

- Retention in care: Patients being treated for OUD have higher retention rates if on Stimulants and Benzos.
- Length of time at job
- Recent accidents/injuries
- Symptom scales?
- UDAS-as expected?

Cochrane Review 2018
Treatment for ADHD in Adults w/Amph

- Review of 19 RCT's using Dextroamphetamine, lisdexanfetamine, and mixed Salts.
- 18 were US studies, 10 multi site
- Mean length of trials 5.3 weeks (highest 20)
- All placebo controlled
- 16/19 were Pharma funded, 1 publicly funded and 2 unclear

Cochrane 2018 Outcomes

- Average age 35, 57% male, most causian
- Outcomes looked at:
    1) Severity of ADHD
    2) Retention in treatment
    3) Adverse events

Cochrane 2018 Results

- First and foremost, the studies were deemed low to very low quality
- Some found 30% ADHD symptom reduction (this is very subjective obviously)
- There was no difference in outcomes of stimulant vs. non stimulant medications
- No difference in retention
- There were more adverse events in AMPH group

Cochrane Methylphenidate Review 2022

- Similar limitations in this review which included Pharma influence and so on…
- Similar low quality results to the other review

Just Some Final Thoughts

- There is little data/evidence that supports effectiveness of ADHD treatment in adults
- Studies to date have heavy Pharma influence and studies should be evaluated with that in mind
- Most studies look at short term outcomes
- This feels a lot like what we went through with opioids
- Careful evaluation of patients and thoughtful prescribing should be encouraged

Relationship Between Adhd and SUD's

- The relationship between ADHD and SUD's is complex and is likely not just a case of "self medicating" as there is no particular preference of one substance over another.
- Genetic factors may be a factor
- Studies exploring common neuronal pathways indicate that they may share anomalies in circuits related to reward processing (Dopamine)

Relationship Between ADHD and SUD's

- Onset of SUD is earlier in ADHD patients
- Duration of active SUD is longer
- More frequent, and heavier substance use
- More difficulty achieving remission
- Lower treatment retention for SUD's
- Higher risk of risk of relapse

Relationship Between ADHD and SUD's

- Link between ADHD and SUD's is bidirectional
- SUD population has higher rates of ADHD
- ADHD patients have higher rates of SUD's than the general population
- Take away: Diagnosis with one disorder should likely trigger evaluation for the other.

Prevalence of ADHD in SUD Patients

- Recent Meta-Analysis by Rohner et al. found overall prevalence of about 21 %
- 19% in the cocaine SUD group
- 18% in the OUD population
- Highest prevalence in the ETOH group at 25%
- In one small study prevalence was 43% in patients with Methamphetamine use disorder (Franke et al 2021)
- 35% of patients with cannabis use disorder

So, If We Treat This Group What is the Goal?

- Improved relationships
- Decreased accidents
- Employment stability
- Decreased Substance use/Relapse
- Keep them from entering or re-entering the Legal system

What Does the Literature Currently Support? (or not Support)

- If a patient has an SUD, they should be evaluated for the presence of ADHD (Johnson et al. 2021)
- There is no consensus on which should be treated first, ADHD or SUD.
- Recent Systematic Review of the Literature on Adolescents with SUD showed no evidence of efficacy of pharmacotherapy for ADHD although in adolescents w/o SUD there is evidence to support treatment. (Ozgen et al 2021)

What Does the Literature Currently Support? (or not Support)

- There is only limited efficacy noted in adults with ADHD and SUD's and that was only in two trials in which much higher stimulant doses were used.
- There was a recent study that showed "robust association" with both short and long term retention in treatment…in contrast, a previous Cochrane meta-analysis showed no improvement with treatment.

So Based on the Evidence Do We Treat? My Thoughts

- Understand that every patient situation is different
- Any consideration to treat should depend on a good history, and hopefully a previous evaluation documenting ADHD as a child, in a perfect world evidence symptoms started before age 7
- In adults without previous evaluation, I consider referral.
- We must always consider symptomatology is easily available on line and patients may “prep” for evaluation

So Based on the Evidence Do We Treat? My Thoughts

- Urine drug screens at follow ups a great idea, and pill counts if diversion a concern.
- Treatment with stimulants should be considered when patient needs functional improvement for job, child care or other daily responsibilities.
- Marijuana is an issue. Clearly this affects cognition and may negate the effects of a stimulant. Patient education a must.

So Based on the Evidence Do We Treat? My Thoughts

- If you decide to treat, when to start is another issue to consider. Previous guidelines were suggesting after a year of recovery. This was not based on any data to my knowledge.
- Make a plan of what your action will be if the patient relapses, and make sure the patient is aware of the plan. Patient Safety is important.
- Phone a friend if you need to.

Summary

- ADHD is real, and affects patients with SUD's at a higher rate than the general population
- For the most part, good evidence to treat ADHD is lacking in the event of a comorbid SUD
- Continued research will hopefully better define evidence based guidelines in the future
- Until then, thorough evaluation and careful prescribing based on each patients specific circumstances will be the rule.

Want More Addiction and Opioid Education?

- Join Project ECHO weekly addiction topics through STRATIS Health
- Weekly programs from 12:15-1:15 every Wednesday
- FREE CME
- Facilitated by Kurt DeVine MD FASAM and Erin Foss RN CARN
- Contact Kstangl@Stratishealth.org or Kurtdevine@centracare.com

TREATING ADHD IN PREGNANCY

Claire Drom MD

WHAT WE KNOW ABOUT ADHD AND PREGNANCY

- Unmanaged ADHD has significant risks to health of mother, unborn child, and family unit
  - Gaps in prenatal care
  - Increased rates of substance use
  - Dangerous driving
  - Impaired work performance and financial implications
  - Social impairments
- ADHD symptoms appear stable through pregnancy
- **Women who discontinue ADHD medication have increased risk of experiencing depressive symptoms as well as dysfunction in the family unit**
- **The presence of an ADHD diagnosis is associated with drastically increased rates of depressive and anxiety disorders in the postpartum period**
  - 17% with ADHD went on to have depressive disorder diagnosis (vs 3% without ADHD)
  - 25% with ADHD went on to have an anxiety disorder diagnosis (vs 5% without ADHD)
- Untreated ADHD may be associated with increased pregnancy loss, increased rate of major malformations, and preterm birth

WHAT DO WE KNOW ABOUT MEDICATION SAFETY IN PREGNANCY?

- Until recently, most studies based on exposure to stimulants used in abuse
- Methylphenidate exposure associated with small increased risk of cardiac malformations
  - Risk, without exposure is ~1%. Risk with exposure is ~1.63%
- Amphetamines do not seem to be associated with increased rate of any type of major malformation
- There is a small (1.3-fold) increased risk of preeclampsia and preterm birth when stimulants are used through pregnancy
- **Overall, consensus is that women with moderate-severe ADHD not stop stimulant medication due to these concerns**
- Atomoxetine (990 exposures) not associated with congenital malformations
- **Modafinil and armodafinil are CONTRAINDICATED in first trimester (3-4x increased rate of major malformations)**
- Many studies have examined neurodevelopmental outcomes in children who were exposed to stimulants in utero. No association between medication exposure and neurodevelopmental diagnoses
  - Parental ADHD diagnosis is STRONGLY associated with offspring with ADHD // Exposure to stimulants NOT associated with childhood diagnosis of ADHD

WHAT ABOUT LACTATION?

Essentially, no data. For stimulants, we have 6 case reports on methylphenidate and 2 on amphetamines.

Infant serum levels very low to undetectable. Relative infant dose is <<10% cut off point

WHAT IS A PRACTICAL APPROACH TO MEDICATION MANAGEMENT?

- After you feel confident about the diagnosis…***
- Patient-dependent!
- Gather a thorough review of how ADHD has affected the patient's ability to drive safely, engage in work in and out of the home, maintain relationships, function as a parent, avoid drugs of abuse (including tobacco and cannabis), etc
- Agree on concrete metrics for assessing response to stimulant therapy.
  - Don't forget interpersonal function and functioning as a parent
- **The best medication is one that has worked. Use the lowest EFFECTIVE dose**
  - Pregnancy is not a time for "trialing" medications when we know that something has been previously beneficial

PRACTICAL APPROACH (CONT)

- **Drug holidays** and/or more PRN use of stimulants is more common in this population
- While ADHD symptoms may stay stable through pregnancy, a patient with ADHD is at higher risk of developing mood and anxiety disorders throughout and after pregnancy. Monitor closely for these symptoms
- Postpartum, assess how a stimulant may be impacting an erratic sleep schedule
- In lactation, to focus on minimizing exposure to the infant:
  - Immediate release formulations are preferred (may also be better for mom's sleep patterns)
  - Pump or breastfeed before taking IR dose

RESOURCES

- Mass General Website: MGH Center for Women's Mental Health
- Barkin Index of Maternal Functioning
- Medication Fact Sheets from MotherToBaby.org
- Wender Utah Rating Scale (another ADHD scale)

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