ADHD and substance use disorders: Subtype and gender differences

Results from the Bordeaux Addiction Cohort Study

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Disclosures

• Funding: PHRC 2006, MILDT 2010
• The sponsors had no role in the study design, collection, analysis or interpretation of the data
• No conflict of interest

Introduction (1)

• High prevalence of ADHD in adult substance use populations (Wilens 2004; Wilens 2011; van Emmerik van Oortmerssen 2012)
• Gender differences
  – Higher rates of psychiatric comorbidities in women with ADHD (Cumyn 2009)
  – Higher rates of substance use disorders (SUD) in men with ADHD (Groß-Lesh 2013; Cumyn 2009)
• Role of ADHD subtype?
  • Hyperactivity Impulsivity (HI)
  • Inattention (I)
  • Combined (C)

Introduction (2)

• Subtype differences
  – More severe SUD in Combined subtype (ADHD-C) (Tamm 2012)
  – Adults with ADHD-C more likely to have Axis I and Axis II disorders (Cumyn 2009)
• Impact of gender and ADHD subtype on addiction severity and psychiatric comorbidity in comorbid ADHD and addictive disorder?

Objectives

• To describe
  – Sociodemographic, addiction and psychiatric characteristics
  – In a sample of ADHD individuals who seek treatment for addictive disorder
• To examine differences according to
  – Gender
  – ADHD subtype

Methods - Study sample

• Aquitaine Addiction Cohort
  – Participants who seek treatment for SUD or non-substance addictive disorder
  – In an outpatient setting
• Selection of participants who met criteria for ADHD
  – Childhood and/or adult form
Results - Sample characteristics

- **N = 58**
- **Mean Age: 31.1 y.o. (SD: 8.8)**
- **Males: 82.8% (n=48)**
- **ADHD diagnosis**
  - Adult: 51.7% (n=30)
- **ADHD subtypes**
  - Hyperactivity/impulsivity predominant (HI) : 39.7% (n=23)
  - Inattention predominant (IN): 36.2% (n=21)
  - Combined (C) : 24.1% (n=14)

Results - Severity of addiction

- **No difference in the severity of the addiction**
  - Between males and females
- **No significant clinical difference in the severity of addiction**
  - Between ADHD subtypes

Results - Psychiatric comorbidities

- **Females ADHD met more often borderline personality disorder than males ADHD**
- **Inattention predominant ADHD subtype met more often antisocial personality disorder than other ADHD subtypes**
- **Individuals with poly-addiction where more often Inattention predominant or Combined ADHD subtype**

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<th>p value</th>
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<th>Female (n=48)</th>
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</tr>
<tr>
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### Methods – Assessment

Attention Rating

- **Treatment entry**
  - mASI
  - MINI
- **ADHD evaluation**
  - SCID
  - CADD

### Results – ADHD subtypes by gender

- **No difference in the history of addiction**
  - Between males and females
- **Between ADHD subtypes**

<table>
<thead>
<tr>
<th>Gender</th>
<th>HI (%) (n)</th>
<th>IN (%) (n)</th>
<th>C (%) (n)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>35.4 (17)</td>
<td>30.0 (16)</td>
<td>10.0 (5)</td>
<td>48</td>
</tr>
<tr>
<td>Female</td>
<td>30.0 (6)</td>
<td>30.0 (3)</td>
<td>10.0 (1)</td>
<td>10</td>
</tr>
</tbody>
</table>

- **Hyperactivity/impulsivity predominant subtype where more likely to be females**

### Results – History of Addiction

- **No difference in the history of addiction**
  - Between males and females
- **Between ADHD subtypes”

<table>
<thead>
<tr>
<th>Subtype</th>
<th>Male (n=23)</th>
<th>Female (n=25)</th>
<th>p value</th>
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<tr>
<th>Comorbidities</th>
<th>% (n)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOD</td>
<td>40.3 (11)</td>
<td>30.0 (3)</td>
</tr>
<tr>
<td>No. person.TX</td>
<td>45.7 (2.6)</td>
<td>46.4 (4)</td>
</tr>
<tr>
<td>BPD</td>
<td>21.3 (1)</td>
<td>21.3 (1)</td>
</tr>
<tr>
<td>ASPD</td>
<td>29.8 (14)</td>
<td>20.0 (2)</td>
</tr>
<tr>
<td>Polyaddiction</td>
<td>29.0 (2)</td>
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Discussion (1)

- ADHD males and females did not differ on
  - Severity of addiction
  - Axis I psychiatric comorbidities
  - ADHD females where more likely to meet borderline personality disorder than males

- Not consistent with previous studies
  - Small sample
  - High prevalence of psychiatric comorbidities
  - Severity of the addiction is high

Discussion (2)

- ADHD subtype
  - Females where more likely to be Hyperactivity/Impulsivity predominant subtype
  - Not linked to severity of addiction, or psychiatric comorbidities
  - No difference in history and severity of addiction between subtypes
  - Unless considering poly-addiction as more severe addiction
  - Inattention predominant or Combined ADHD subtype = might be associated with more severe addictive disorders

Perspectives

- Larger sample is needed to confirm the findings
- Further studies are needed to compare with addictive disorders samples without ADHD