



**Karolinska
Institutet**

Centralstimulerande läkemedel vid samsjuklighet av ADHD och beroende

Christoffer Brynte

PhD-student Karolinska Institutet

Physician Beroendecentrum Stockholm


Christoffer.brynte@ki.se

Attention Deficit/Hyperactivity Disorder (ADHD)

- 5-7% av barn och vuxna
- Symtom kvarstår ofta i vuxen ålder
- Ökad sannolikhet att lida av beroendetillstånd
- Svårare sjukdomsförlopp vid dubbeldiagno

ADHD + SUD

Prevalence Estimates of ADHD in a Sample of Inpatients With Alcohol Dependence

Journal of Attention Disorders
1–12
© The Author(s) 2018
Reprints and permissions:
sagepub.com/journalsPermissions.nav
DOI: 10.1177/1087054717750272
journals.sagepub.com/home/jad


Mathias Luderer^{1,2} , Christian Sick⁴, Nurcihan Kaplan-Wickel⁴,
Iris Reinhard³, Agnes Richter⁴, Falk Kiefer^{1,2}, and Tillmann Weber⁴

Abstract

Objective: ADHD is common in patients with alcohol dependence, but prevalence results are inconsistent. We investigated ADHD prevalence in a complex design to avoid over- or underdiagnosing. **Method:** Patients with alcohol dependence starting long-term residential treatment were included. A structured interview (Diagnostic Interview for ADHD in Adults [DIVA]) was conducted on all patients. DIVA results indicating childhood or adulthood ADHD were assessed in successive diagnostic interviews by two expert clinicians. **Results:** 415 of 488 patients had completed the entire diagnostic assessment. ADHD prevalence was 20.5%. DIVA results correlated moderately with experts' diagnoses. In patients with ADHD, a higher comorbid illicit substance use was prevalent and alcohol dependence started earlier and was more severe. **Conclusion:** This study provides the largest sample on ADHD prevalence in alcohol dependent inpatients. Despite great efforts to avoid overestimation, we found every fifth patient to have ADHD. ADHD diagnosis should not be based solely on a structured interview but should be clinically confirmed. (*J. of Att. Dis.* XXXX; XX(X) XX-XX)

Överlapp mellan ADHD och beroende

	HC	ADHD	ADHD + COC	ANOVA
Motor impulsivity (stop signal task)				
Stop signal reaction time (ms)	127.4 ± 20.6	146.2 ± 29.4	193.2 ± 57.3	$P < 0.001$
Mean reaction time (ms)	501.3 ± 134.2	522.7 ± 163.2	504.9 ± 74.5	NS ($P = 0.889$)
Accuracy on go trials (%)	98.9 ± 1.8	97.6 ± 2.7	98.2 ± 1.3	NS ($P = 0.103$) (KW)

Centralstimulerande vid ADHD/beroende?

- Effektiv?
- Säker?
 - Missbruk
 - Spridning

Double-blind placebo-controlled trial of methylphenidate in the treatment of adult ADHD patients with comorbid cocaine dependence.

Schubiner H¹, Saules KK, Arfken CL, Johanson CE, Schuster CR, Lockhart N, Edwards A, Donlin J, Pihlgren E.

Author information

Abstract

In this 12-week double-blind placebo-controlled trial of methylphenidate (MTP) versus placebo in 48 cocaine-dependent attention-deficit/hyperactivity disorder (ADHD) adults, the authors sought to determine whether MTP would be safe, control ADHD symptoms, and affect cocaine use. Efficacy indexes revealed significantly greater ADHD symptom relief in the MTP group. There were no group differences in self-reported cocaine use, urinalysis results, or cocaine craving. Because of the relatively small sample size, the results are preliminary. However, we found that MTP improved subjective reports of ADHD symptoms and did not worsen cocaine use while participants were in treatment.

[Drug Alcohol Depend](#). 2010 Apr 1;108(1-2):130-3. doi: 10.1016/j.drugaldep.2009.11.006. Epub 2009 Dec 16.

Sustained release methylphenidate for the treatment of ADHD in amphetamine abusers: a pilot study.

Konstenius M¹, Javaram-Lindström N, Beck O, Franck J.

Author information

Abstract

The efficacy of stimulant treatment in patients with substance use disorders and comorbid attention deficit hyperactivity disorder (ADHD) has been tested for cocaine and alcohol dependence but so far no studies have been conducted in amphetamine dependent individuals. The present trial was a pilot study aiming to test the feasibility of treating amphetamine dependent patients with comorbid ADHD with central stimulant medication. The study was a double-blind, placebo controlled trial with parallel groups design comparing the efficacy of a fixed dose (72mg) of OROS methylphenidate (MPH) with placebo (PL) in reducing ADHD symptoms in currently abstinent adults with amphetamine dependence and ADHD. Twenty-four treatment seeking patients who met the DSM IV criteria for amphetamine dependence and ADHD were randomized to MPH/PL. The trial was conducted at an outpatient facility with twice weekly visits, measuring ADHD symptoms and drug use. Patients rated their ADHD symptoms on a weekly basis and provided supervised urine specimens for drug toxicology twice weekly. All patients significantly reduced their self-rated ADHD symptoms

[Addiction](#). 2005 Dec;100(12):1668-74.

A controlled trial of methylphenidate in adults with attention deficit/hyperactivity disorder and substance use disorders.

Carpentier P¹, de Jong CA, Dijkstra BA, Verburg CA, Krabbe PF.

Author information

Abstract

AIMS: Attention deficit/hyperactivity disorder (ADHD) is common among adult patients with substance use disorders. The benefits of treating ADHD in these patients are uncertain and the prescription of psychostimulants is disputed, because the short-term effectiveness of methylphenidate treatment for ADHD in adults with substance use disorders is uncertain.

DESIGN: Double-blind, placebo-controlled, multiple cross-over (A-B-A-B design) comparative trial
SETTING: In-patient addiction treatment facility.

PARTICIPANTS: Twenty-five patients with ADHD who were receiving in-patient treatment for various substance use disorders.

INTERVENTION: During the course of 8 weeks, each participant completed two phases of placebo treatment, in a fixed low-dosage schedule (up to 0.6 mg/kg/day). Abstinence was maintained during the trial.

MEASUREMENTS: The outcome measure was ADHD symptomatology, as measured with the ADI compared using MANOVA repeated measures.

FINDINGS: Nineteen of the 25 patients completed the trial. A significant reduction in ADHD symptom conditions. The positive response to active treatment (nine patients; 36%) was not significantly high (20%).

CONCLUSIONS: In this small pilot study, the effect of low-dose methylphenidate in adult ADHD patients with substance use disorders is limited. ADHD symptoms in adults were susceptible to a distinct short-term placebo response.

[Drug Alcohol Depend](#). 2007 Feb 23;87(1):20-9. Epub 2006 Aug 22.

Treatment of cocaine dependent treatment seekers with adult ADHD: double-blind comparison of methylphenidate and placebo.

Levin FR¹, Evans SM, Brooks DJ, Garawi F.

Author information

Abstract

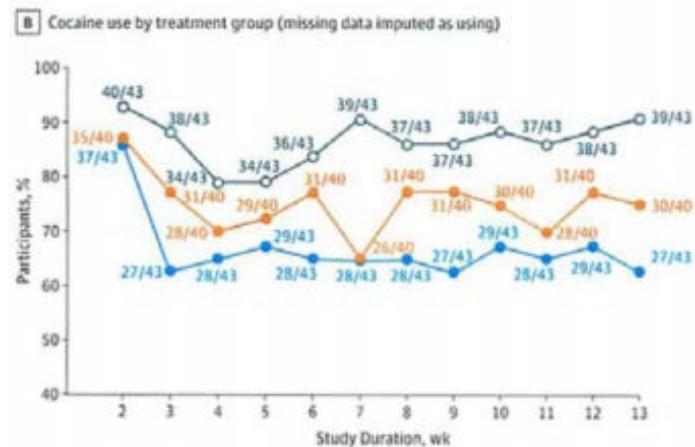
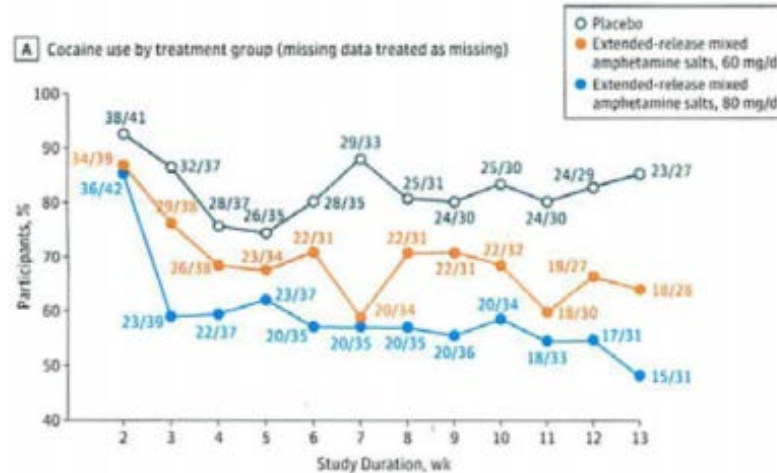
The purpose of this double-blind 14-week trial was to compare the efficacy of sustained-release methylphenidate (MPH) to placebo (PBO) in treating adult attention deficit hyperactivity disorder (ADHD) symptoms in current cocaine dependent (CD) treatment seekers. The randomized sample consisted of 106 participants who were predominately male (83%) and 60% Caucasian, 14% Hispanic, 20% African-American and 6% other. All participants met DSM-IV criteria for ADHD and CD. There were no significant demographic differences between the two treatment groups. All participants received weekly individual cognitive behavioral therapy. There was no difference in retention rate based on treatment group ($p = .91$). The majority of the PBO group and the MPH group reported >30% improvement in their ADHD symptoms (55% versus 47%), with no significant difference between the two groups ($p = .44$). Using a combined outcome measure (>30% reduction in ADHD symptoms and CGI <3), the response rates were similar for both groups (28% PBO versus 30% MPH; $p = .83$). Longitudinal analyses of the urine toxicology data using generalized estimating equations, revealed a decrease in the probability of cocaine positive urine samples during the trial for the MPH group compared to the PBO group ($p = .001$). Further analysis suggested that for the MPH group, ADHD treatment responders, based on a semi structured clinical interview, were more likely to have a reduction in cocaine use compared to the non-ADHD responders. Although sustained-release MPH did not show superiority over PBO in treating ADHD symptoms, this trial provides some evidence that improvement in ADHD symptoms (clinician rated) among those patients receiving MPH, but not placebo, was associated with a reduction in cocaine use.

PMID: 16930863 DOI: 10.1016/j.drugaldep.2006.07.004

Centralstimulerande vid ADHD/beroende?

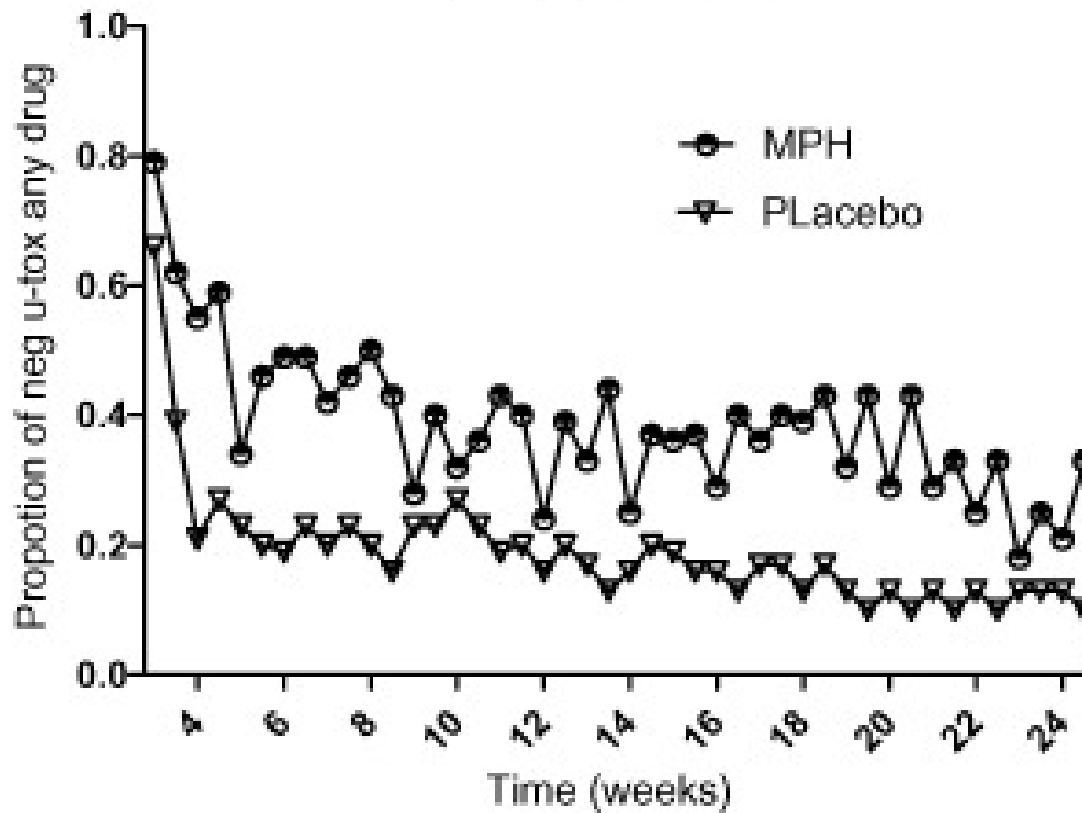
- Standarddoser av metylfenidat:
 - Måttlig effekt på ADHD-symptom
 - Ingen demonstrerad effekt på droganvändning
- En fråga om dosering?

Centralstimulerande vid ADHD/beroende?



Centralstimulerande vid ADHD/beroende?

3a. All substances



Centralstimulerande vid ADHD/beroende?

- Vem tjänar på behandlingen?
- Försöker patienterna bli "höga"?
- Effekt på kognitiva funktioner?

Effekten av metylfenidat på kognitiva funktioner hos individer med ADHD och amfetaminberoende

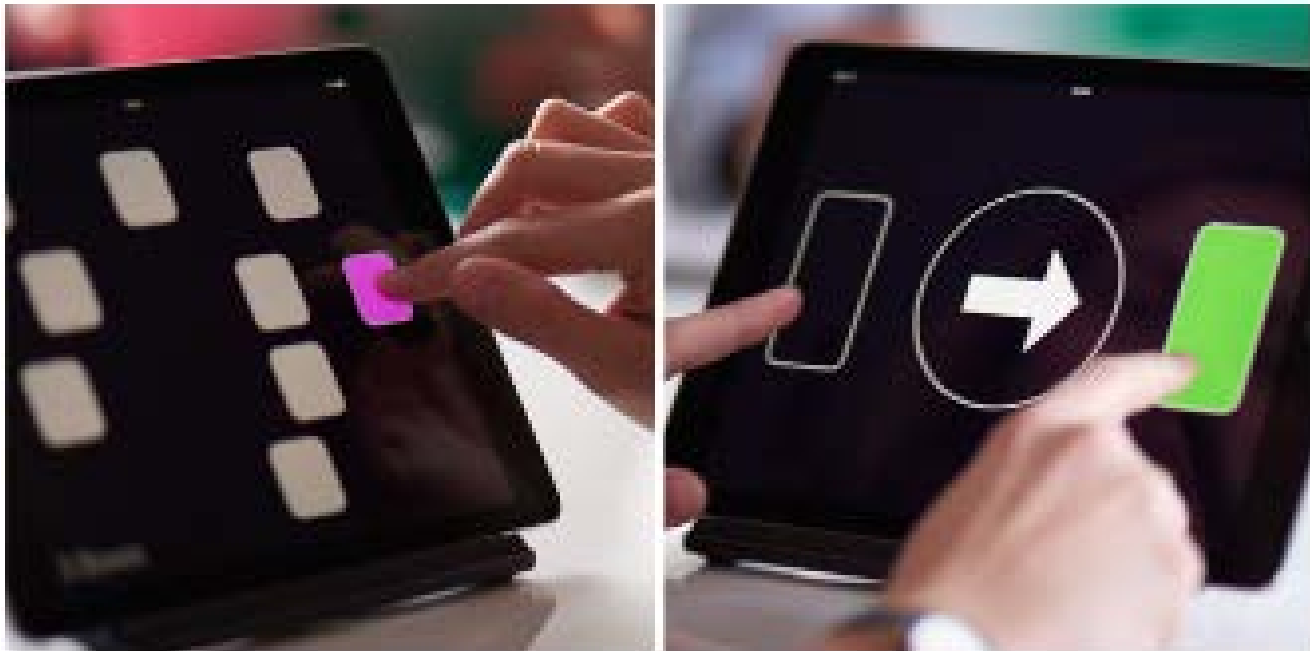
- **Syfte**
 - Undersöka olika dosers (72mg resp 180mg) effekt av metylfenidat på arbetsminne och inhibitorisk kontroll
 - (Effekt på Default Mode Network mätt med magnetoencephalografi)
- **Design:**
 - Experimentell, single-blind, within-subject
- **Primära utfallsmått:**
 - Effekten av 72mg och 180mg metylfenidat på Stop Signal Reaction Time (SSRT) och Spatial Working Memory (SWM) mätt med CANTAB ® jämfört baslinje

Effekten av metylfenidat på kognitiva funktioner hos individer med ADHD och amfetaminberoende

- Inklusionskriterier:
 - Svårt amfetaminbrukssyndrom
 - ADHD
 - Drogfri (inkl. alkohol) 7 dagar före inklusion
- Exklusionskriterier:
 - Andra svåra psykiatriska och somatiska diagnoser
 - Psykoaktiva läkemedel

Procedures

CANTAB® Cognitive tests





International Collaboration on ADHD and Substance Abuse

- Australia
- Belgium
- Denmark
- France
- Germany
- Hungary
- Israel
- Norway
- Puerto Rico
- Spain
- South Africa
- Sweden
- Switzerland
- The Netherlands
- United States of America

Pågående: International Naturalistic Multi-center Treatment Study of Comorbid ADHD/SUD

- **Naturalistisk/observationell kohortstudie**
 - ICASA Network
- **Syfte:**
 - Beskriva behandlingsutbud
 - Beskriva skillnader i utfall av olika behandlingar
 - Identifiera prediktorer för lyckad behandling avseende beroende, ADHD och retention i behandling
 - Säkerhetsprofil av olika farmakologiska alternativ
 - Generera hypoteser för framtida kliniska prövningar

International Naturalistic Multi-center Treatment Study of Comorbid ADHD/SUD

- **Design:**
 - Naturalistisk/Observationell
 - 600 individer med ADHD och beroende
- **Utfallsmått:**
 - Substansbruk (TLFB)
 - ADHD symptom
 - Retention i behandling

International Naturalistic Multi-center Treatment Study of Comorbid ADHD/SUD

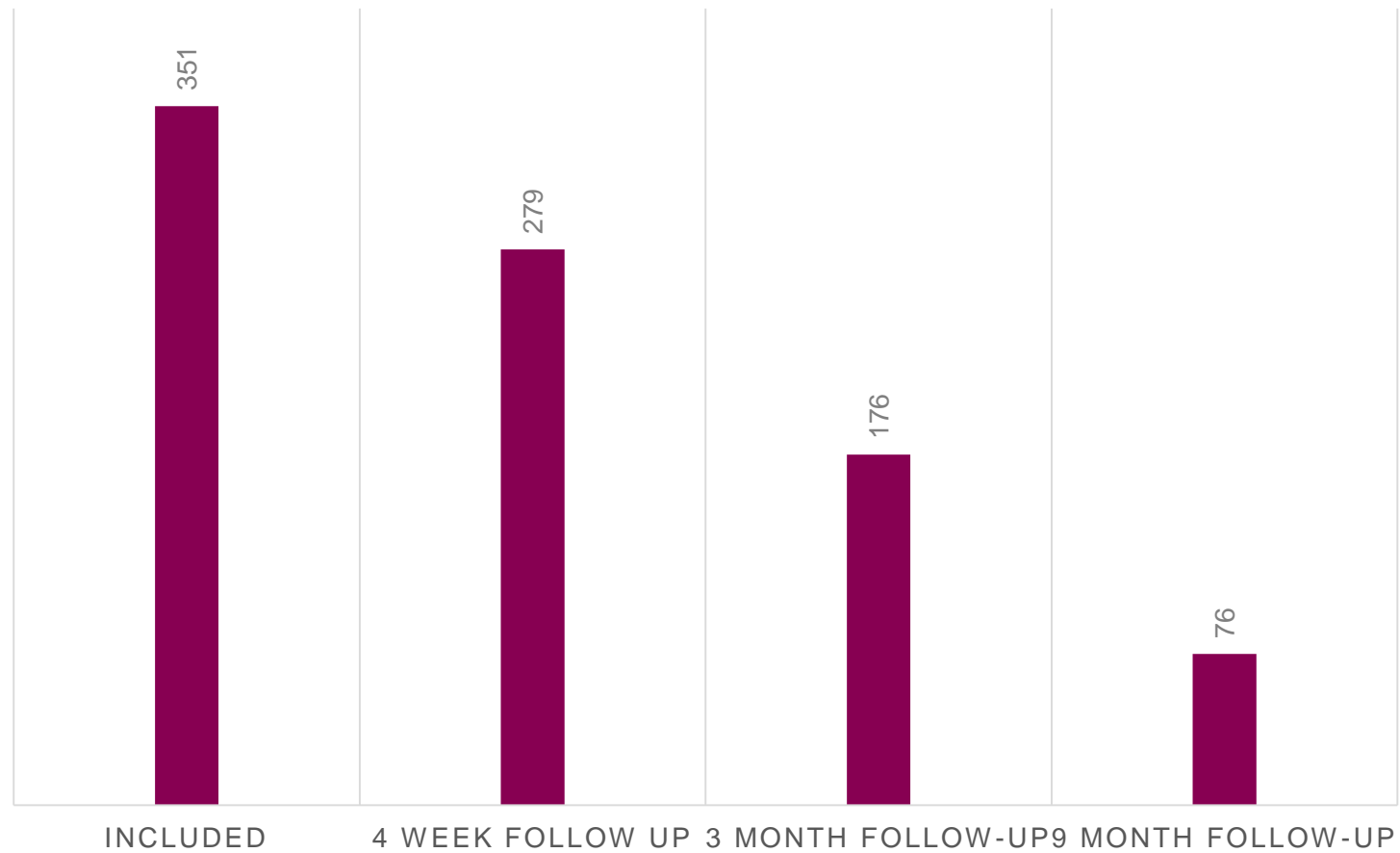


International Naturalistic Multi-center Treatment Study of Comorbid ADHD/SUD

Baseline, 3 månader, 9 månader:

- Patient records and interview
 - Sociodemografi
 - Pågående behandling
 - Samsjuklighet
 - Substansbruk (Time Line Follow-Back (TLFB))
 - ADHD symptom (ASRS)
 - Self-efficacy
 - CGI-S
 - EQ-5D
- Övrigt
 - DERS-16
 - Nicotine dependence
 - Craving
 - Anger & aggression
 - Sensitivity to reward
 - Religious salience

ENROLLED IN STUDY



Summary

- Vanligt med samsjuklighet av ADHD och beroende
- Svårare sjukdomsförlopp
- Exekutiv and emotionell dysregulering
- Centralstimulerande ett viktigt behandlingsalternativ