Candidates of TAP Outstanding Research Awards

Generation antipsychotics in children and adolescents, with a supposed efficacy on some core dimensions of ASD as well as on the management of several comorbidities. Psychopharmacological treatment is essential for the management of some behavioral problems and comorbidities. Risperidone and aripiprazole are the drugs that have been studied most and have been shown to be effective in reducing psychotic symptoms (irritability; repetitive, aggressive, and impulsive behavior) and in improving some aspects of sociability in controlled clinical trials. They can also be useful in the management of the manic phases of Bipolar Disorder (BD). Mood stabilizers are preferable as maintenance treatment in comorbid ASD-BD, although there is a substantial lack of studies in this area. Several observations suggest the efficacy and safety of anticonvulsants, particularly valproate and lithium. The use of antidepressants, both tricyclics and selective serotonin reuptake inhibitors should be considered in the presence of comorbid anxiety disorders. The category of ASD includes heterogeneous entities, in terms of both specific clinical manifestations and psychiatric comorbidities. The progression of ASD from childhood to adulthood is influenced by the severity of the clinical picture, gender, onset of neurological disorders, such as epilepsy during adolescence, and by psychiatric comorbidity. Due the heterogeneity of clinical manifestations and the poor knowledge of specific childhood disorders, adult psychiatrists too often underdiagnose ASD, classifying these patients as affected by mental retardation, schizophrenia, or other psychotic disorders. Long-term prospective investigations are needed in order to provide more extensive and appropriate supported living and employment schemes.

Keywords: autism, adult, sociodemographic

References:

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[Abstract:0405] ADHD

Compliance with methylphenidate treatment and drug abuse of adults with attention deficit hyperactivity disorder (ADHD)

Yasemin Sanal1, Cagdas Yokusoglu2, Ilhan Yargic2

1Department of Psychology, Adana Science and Technology University, Faculty of Humanities and Social Sciences, Adana-Turkey
2Department of Psychiatry, Istanbul University, Istanbul Faculty of Medicine, Istanbul-Turkey

INTRODUCTION: Attention deficit hyperactivity disorder (ADHD) is a neuropsychiatric disorder characterized by symptoms of inattention and without evidence of impulsivity/hyperactivity. In 80% of the children with ADHD, symptoms persist through adolescence and adulthood. Compliance with treatment is an important factor for the outcome and patients' health. When related literature is revised, it is seen that compliance with treatment in ADHD is studied in children. It is also important to mention that, though stimulants are highly effective as first line pharmacotherapies for ADHD, they pose a risk for abuse. Patients with ADHD have a high risk for substance abuse. It was found that adults with ADHD had significantly higher rates of drug as well as comorbid drug and alcohol use disorders than non-ADHD adults. There are many studies conducted in order to determine comorbid diagnoses with ADHD. According to one study, adults with ADHD, compared with adults without ADHD, had significantly more current Axis I disorders. The purpose of the present study is to determine the prescribed methylphenidate use routines of adult patients diagnosed with ADHD. How strictly these patients follow the prescribed doses and timings will be evaluated in order to see their compliance with methylphenidate treatment. The study also aims to understand the prevalence of comorbid conditions and drug abuse of these patients.

METHOD/PROCEDURE: 42 out-patients followed at the ADHD treatment program in the Istanbul Medical Faculty Hospital Psychiatry Department were enrolled in the study. Before confidential semi-structured face to face interviews, participants were informed and
consent provided. After completing a socio-demographic form, participants were asked to provide information about the details of their disorder, their medicines for ADHD and details of other existing diagnosed disorders if any. Details like type of medication, age of patient at the time of their first diagnose of ADHD, and drug use periods were investigated. Patients were asked whether they use the ADHD medicine differently from their prescription in terms of either the dosage or the timing. Participants also provided information about their lifetime use of various illicit and licit drugs including tobacco, cannabis, inhalants, synthetic cannabinoids, heroin, cocaine, amphetamines, hallucinogens, any type of medicine in order to experience intoxicating effects and any other drug not already mentioned. Patients over 18 years of age who had been prescribed methylphenidate for ADHD for at least 3 months and volunteered to participate were included in this study.

RESULTS: A total of 42 patients diagnosed with ADHD participated in the study, 11 (26.2%) female and 31 (73.3%) male. The mean age of the participants was 22.45 years±5.1 (range 18-43). Thirty (92.9%) of the participants were single and 3 (7.2%) were either married or engaged. 4 (9.5%) of the participants were secondary school graduates, 21 (50%) of them were high school graduates, 16 (38.1%) had graduated from either vocational school or undergraduate program, and 1 (2.4%) had a higher education degree. 52.2% (n=22) of the participants were students and 2 of these students had part-time jobs; 11 (26.2%) of the participants were employed and 9 (21.4%) were neither students nor employed. Of the participants, 18 (42.9%) had been diagnosed with ADHD at the age of 12 or younger, 6 (14.3%) had been diagnosed between the ages 13-17 and 18 (42.9%) had been diagnosed at the age of 18 or over. Participants were also asked to report the main ADHD feature as ‘only attention’; ‘only hyperactivity/impulsivity’ and ‘both attention and hyperactivity/impulsivity’.

26 (61.9%) of the participants did not have any additional diagnosis whereas 16 (38.1%) had at least one additional diagnosis. 3 of these 16 participants had 2 comorbid diagnoses (in all three cases, the third comorbid disorder was a depressive disorder). The distribution of the comorbidities: Depressive disorders (n=6), Obsessive Compulsive Disorder (n=3), Anxiety Disorders (n=2), Mild MR (n=2), Borderline PD (n=2), Tic Disorders (n=1), Conversion (n=1), Conduct Disorder (n=1) and Dyslexia (n=1).

36 (84%) of the participants had taken their medication on their own whereas 7 (16%) of them had taken them under somebody else’s supervision. 15 (35.7%) of the participants reported using the medicine differently (in timing) than prescribed; the distribution being as follows: 4 (9.5%) were ‘not using it on the weekends’; 4 (9.5%) were ‘using it periodically’; 11 (11.9%) were ‘using it only as needed’ and 2 (4.8%) were ‘frequently missing doses’. 16 (61.9%) reported changing the doses when taking the medicines they were prescribed: 4 (9.5%) were ‘using more than the doctor’s prescription’; 1 (2.4%) was ‘using less than the doctor’s prescription’ and 11 (26.2%) were using ‘as much and frequently as they feel necessary’. 14 out of the 15 participants who tended to use their medicine differently (in timing) than prescribed were among those who took their medication on their own; whereas only 1 participant who used the medicine differently (in timing) than prescribed was taking it under someone else’s supervision. From a different point of view, 14 (32.6%) of the 36 participants who had taken their medication on their own were prone to use medicine differently than their prescriptions, and this constitutes 33.3% of the total participants.

11 (26.1%) of the participants reported using illicit/licit drugs (to experience intoxication effects) at least once in their lifetime. 6 participants used only one type of illicit/licit drugs whereas the remaining 5 used more than one type of illicit/licit drugs. The distribution of the drugs: Cannabis (n=10), Synthetic Cannabinoids (n=2), Cocaine (n=1), Amphetamines (n=1), Hallucinogens (n=1), Licit drugs for intoxication purposes (n=3).

DISCUSSION: Compliance with treatment is an important factor for the outcome and patients’ health. The present study intended to determine the compliance with methylphenidate treatment in adults with ADHD. The results suggest that the participants with ADHD tend not to use their medications properly, especially the ones who take their medications independently. 15 participants were not following their prescription schedule and 14 of these participants were among those who were taking their medicines independently. Similarly, 16 participants tended to change the dose of their medication based on their needs. It is thought that there is a high possibility of increase in compliance of medication treatment when the patient is supervised or given the prescribed dose of medicine by someone else. When symptoms are taken into consideration, adults with ADHD report mostly ‘attention’ problems, followed by combined type; and least reported is ‘hyperactivity/impulsivity’ with the ratios 47.6%, 42.9% and 9.5%, respectively. Similarly findings of another study show that patients in the predominantly hyperactive/impulsive group represent a small rate among the total number of participants. There is a high possibility that the hyperactivity/impulsivity problems common in childhood ADHD tend to fade, while in adults, inattention problems arise or stand out over time.

Lifetime substance use was high in the sample group. Our findings show that ADHD patients are a non-negligible risk group for lifetime substance use with the ratio of 11 (26.1%). A 38.1% comorbidity rate seems lower than the previous reports in the literature. Depression was the most common comorbid diagnosis, and this finding was compatible with the literature.

The main limitation of the present study was its reliance on self-report as the primary method of assessment. Although prescribed doses and medications were cross-checked from patient files, it was not feasible to cross-check the use of illicit drugs or drifts from the prescribed methylphenidate using routines that the participants reported. It is possible that participants underreported the frequency of drug use or compliance of treatment due to the socially undesirable nature of these behaviors.

The scope of the present study will be enlarged in a subsequent study as data collection continues with new incoming patients.

Keywords: attention deficit hyperactivity disorder, methylphenidate, substance abuse
Subjects came to the lab for 3 days. They provided breath and urine samples each day upon arrival. Subjects were removed from the study if they showed signs of altered mental status. Demographic information on the two groups is provided in Table 1.

Demographic data included age, education level, number of smokers, and level of tobacco use. There were no significant differences between the two groups in these variables. Additional variables included gender, race, family history of alcoholism, magnetic resonance imaging (MRI) findings, and use of psychoactive medications. The groups were similar in age, education level, number of smokers, and level of tobacco use. There were no significant differences between the two groups in these variables. The groups were compared on these variables using t-tests for continuous variables and Fisher’s exact test for categorical variables. There were no significant differences between the two groups in age, education level, number of smokers, and level of tobacco use.

Subjects also provided breath alcohol samples using an AlcoSensor III (Intoximeters, Inc.), which required subjects to expire air for 10 seconds to measure alcohol content. No differences were observed in subject demographics, including gender (Fisher’s exact = 0.41, ns); age (t (24) = 1.29, ns); education level (t (24) = 0.51, ns); number of smokers (6 in each group); level of tobacco use (Mann-Whitney U, z = 0.78, ns); Shipleys scale cognitive aptitude (Zachary, 1986) (t (24) = 0.75, ns); or lifetime use of other drugs (Fisher’s exact = 0.24, ns). Demographic information on the two groups is provided in Table 1.

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INTRODUCTION: Aggression is one of most enduring, complex, and problematic forms of human social interaction. The consequences of human aggression exact a substantial toll on public health and criminal justice systems, communities, and individuals. Epidemiological and experimental data show that chronic alcohol dependence is related to an increased risk for assault and aggressive behavior. By some estimates, as much as 50% of all violent crimes, and greater than 60% of intimate partner violence, involve alcohol. A review of the neurobiology of personality disorders concluded that impulsive aggression was characterized by abnormal functioning in amygdala, OFC, DLPFC, and anterior cingulate cortex (ACC). In the present study, we employed a well-validated laboratory task the Point Subtraction Aggression Paradigm (PSAP; 1) that was adapted for use during fMRI. The PSAP allows for control and manipulation of independent variables, including the frequency of provocation. The timing and frequency of experimental events can be precisely controlled, allowing for examination of neural activity when individuals are provoked and during bouts of aggressive behavior. Based on previous work in the neurobiology of aggression and brain imaging studies of alcohol-dependent subjects, we hypothesized that compared to control subjects alcohol-dependent subjects would demonstrate (a) more aggressive responding on the PSAP; (b) reduced BOLD activation in frontal cortex (notably, OFC) and the limbic system (reflecting diminished activation of emotional regulatory circuitry); and (c) greater ROI BOLD activation in amygdala following provocation and during aggressive responding.

METHODS:

Subjects: This study was approved by the local IRB (at UTHSC Houston) and in accordance with the Declaration of Helsinki. Participants were recruited through local classified newspaper advertisements. Exclusionary criteria included (a) current or past medical problems (e.g., seizures, diabetes, high blood pressure, renal or cardiovascular disease), (b) current use of any medications, (c) current illicit drug use or alcohol use (measured by daily urinalysis and breath alcohol testing), and (d) current of past history of an Axis I mood or psychotic disorder, as determined by the Structured Clinical Interview for the DSM-4 (SCID-I, version 2.0, First et al., 1996). All subjects with past alcohol dependence met DSM-4 criteria for alcohol dependence within the past 24 months, and were in early full remission, early partial remission, or sustained full remission.

At intake, subjects read and signed an informed consent document. Subjects were provided information about urine drug testing, breath alcohol testing, psychiatric evaluation, experimental procedures and compensation. After consent, subjects provided urine samples for drug screen analysis using a one-step drug screen test card (Innovacon, Inc.), which tested for cocaine, stimulants, opiates, benzodiazepines and marijuana. Temperature monitoring and creatinine level determinations were used to detect attempts to alter urine samples. Subjects also provided breath alcohol samples using an AlcoSensor III (Intoximeters, Inc.), which required subjects to expire air for 10 seconds to measure alcohol content. No differences were observed in subject demographics, including gender (Fisher’s exact = 0.41, ns); age (t (24) = 1.29, ns); education level (t (24) = 0.51, ns); number of smokers (6 in each group); level of tobacco use (Mann-Whitney U, z = 0.78, ns); Shipleys scale cognitive aptitude (Zachary, 1986) (t (24) = 0.75, ns); or lifetime use of other drugs (Fisher’s exact = 0.24, ns). Demographic information on the two groups is provided in Table 1.

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