

- Hahn, A., G.S. Kranz, R. Sladky, U. Kaufmann, S. Ganger, et al., *Long-term testosterone administration affects language areas of the human brain*. Hum Brain Mapp, 2016(accepted).
- Rametti, G., B. Carrillo, E. Gomez-Gil, C. Junque, L. Zubiaurre-Elorza, et al., *Effects of androgenization on the white matter microstructure of female-to-male transsexuals. A diffusion tensor imaging study*. Psychoneuroendocrinology, 2012. 37(8): p. 1261–9.
- Kranz, G.S., A. Hahn, U. Kaufmann, M. Kublbock, A. Hummer, et al., *White matter microstructure in transsexuals and controls investigated by diffusion tensor imaging*. J Neurosci, 2014. 34(46): p. 15466–75.

PT647

Changes in BDNF methylation status before and after receiving Dialectical Behavior Therapy (DBT) in patients with borderline personality disorder

Shu-I Wu^{1,2} MD, PhD; Shen-Ing Liu^{1,2} MD, PhD; Hsian-Yu Lin^{2,3} MD, PhD; Kai-Liang Kao^{*4} MD.

¹Mackay Memorial Hospital, Department of Psychiatry, Taipei, Taiwan, ²Department of Medicine, Mackay Medical College, Taipei, Taiwan, ³Mackay Memorial Hospital, Department of Pediatrics, Taipei, Taiwan, ⁴Far Eastern Memorial Hospital, Department of Pediatrics, Taipei, Taiwan.

*Correspondence

Abstract

Objective: Borderline personality disorder (BPD) is a chronic and debilitating syndrome associated with considerable morbidity, mortality, and high rates of medical and psychiatric utilization services. Literature has demonstrated the therapeutic effects of dialectical behavior therapy (DBT) in patients with BPD. We aimed to explore whether the brain-derived neurotrophic factor (BDNF) might be a natural candidate for a biological correlate of early life stress or an indicator for epigenetic modifications pre- and post- psychotherapeutic treatment.

Method: We proposed this current randomized control trial to test whether epigenetic changes happen during and after DBT treatments. Proportions having suicide or non-suicidal self-injurious behaviors was followed and tested against changes in BDNF methylation levels. Suicidality, depression, hopelessness, quality of life, disability, service utilization, and function were assessed. Our inclusion criteria were adult BPD patients that had at least two episodes of suicidal or non-suicidal self-injurious episodes in the past 5 years, and at least one of which is in the 3 months preceding enrollment. Outcome measures and blood samples were obtained at pre-treatment, 4-month, 8-month and post-treatment (12-month) during 1-year protocol.

Results: In the first year of this study, we recruited 19 patients with BPD into case group and 20 healthy controls. Eight BPD patients started receiving DBT and 11 of them were in the TAU group. Two of the BPD were male, with average age being 32.7 years old for case group and 30.2 years old for control group, respectively. After 4 months, 8 people in the case group have received first stage of DBT. Their QLES and PHQ have shown significant improvement. However, their BDNF methylation levels were not significantly different from baseline, or to compare with controls.

Conclusion: More participants and longer follow-ups are needed to explore whether there were changes in methylation levels over time after different interventions.

SEXUAL DISORDERS: PT648 – PT649

PT648

The effects of chronic treatment with haloperidol, clozapine and aripiprazole on mice isolated vas deferens

Mehmet Hanifi Tanyeri^a, Mehmet Emin Buyukokuroglu^b, Pelin Tanyeri^b, Oguz Mutlu^c, Güner Ulak^c, Füzuzan Yildiz Akar^c, Bekir Faruk Erden^c

^aYenikent Government Hospital, Department of Urology, 54100 Sakarya/Turkey ^bSakarya University, Faculty of Medicine, Department of Pharmacology, 54100-Sakarya/Turkey ^cKocaeli University, Faculty of Medicine, Department of Pharmacology, 41380-Kocaeli/Turkey

Abstract

Specific objective of the study: Sexual dysfunctions have commonly been reported as the resulting side effects of psychotropic drugs such as antipsychotics that result in both short and long-term effects on sexual function. This study aimed to determine the influence of haloperidol, clozapine and aripiprazole on noradrenaline and potassium chlorid (KCl)-induced contractions of the vas deferens.

Methods used: 7 weeks aged male inbred BALB/c ByJ mice were randomly divided into experimental groups (n = 7) as follows: saline; haloperidol 0.125 mg/kg; haloperidol 0.25 mg/kg; clozapine 1.25 mg/kg; clozapine 2.5 mg/kg; aripiprazole 3 mg/kg; aripiprazole 6 mg/kg. Mice were treated by ip injection of drugs during 21 days. After 21 days of treatment, epididymal and prostatic portions of vas deferens were surgically removed and immersed in 20 mL organ baths containing Krebs' solution. The effects of chronic treatment with haloperidol, clozapine and aripiprazole were investigated on noradrenaline (10(-8) to 10(-4) M), and 80 mM KCl-induced contractile responses. Statistical comparison between the groups was performed using ANOVA supported by Dunnett's post hoc test.

Summary of results: There were no significant differences in KCl-induced contractile responses in the epididymal and prostatic portions of mice vas deferens strips among the groups. Noradrenaline-induced contractile responses were significantly inhibited in the epididymal portion of the vas deferens obtained from the haloperidol-treatment group and clozapine-treatment group whereas in the prostatic portions there were no change. However, aripiprazole treatment had no effect on noradrenaline responses in both epididymal and prostatic portions of mice vas deferens.

Conclusions reached: These results revealed that induced contractions of vas deferens were affected after chronic treatment with haloperidol and clozapine but not aripiprazole. Noradrenergic receptors may, at least in part, contribute to changes in vas deferens contractions in mice with chronic treatment of haloperidol and clozapine but not aripiprazole.

PT649

Problematic sexual behavior in young adults: Associations across clinical, behavioral, and neurocognitive variables.

Eric Leppink¹, Samuel Chamberlain², Jon Grant¹, Sarah Redden¹
¹University of Chicago, USA, ²University of Cambridge, UK

Abstract

Objectives: Amongst sexually active young adults, a notable number struggle to control this behavior, resulting in significant impairment and distress. Previous assessments of problematic