Social Cognition and Executive Functions in Children with ADHD in Relation to Salivary Oxytocin Level

Thesis

submitted in partial fulfillment of the requirement of MD degree in Psychiatry

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ABSTRACT

Background: There is evidence supporting a pathophysiological role of oxytocin (OT) in attention deficit hyperactive disorder (ADHD) especially hyperactive and combined subtypes. It is known that children with ADHD show a high rate of social cognitive problems, and reduced social competence as well as cognitive dysfunction. OT was assumed to play a role in the emergence of social cognition deficits in ADHD.

Aim of the study: To assess the level of salivary OT in patients with ADHD and its relation to presenting symptoms, social cognitive deficits and executive dysfunction.

Methods: Forty patients with ADHD recruited from psychiatric outpatient clinic of Fayoum University Hospital and 40 healthy controls matched in age, gender and IQ level (assessed using Stanford Benit Scale- fifth edition). Patients' group were assessed and compared as regards social cognition measured by CANTAB emotion recognition task (ERT) , executive functions assessed using Wisconsin Card Sorting test (WCST) and the level of salivary oxytocin measured by ELISA technique.

Results: Patients showed poorer performance in social cognitive task. Patients showed poorer performance in executive function test. No significant difference was found between both groups as regard oxytocin level. Findings showed statistically significant negative correlation between hyperactive impulsive subtype of ADHD and reaction time of recognition of sadness, disgust and surprise. There was no statistically significant correlation between subtypes of ADHD and executive functions. There was no clinically statistically significant correlation between salivary oxytocin level and subtypes of ADHD.

Conclusion: The presence of social cognitive deficits in ADHD prompts further investigations to focus on the specificity of these deficits and in turn identify ways of managing them. Children with ADHD showed a wider scope of facial affect recognition

deficits and executive dysfunction. Studying oxytocin in this population and its relation to social cognitive deficits, executive dysfunction and symptoms can support the notion that oxytocin is a biological marker for ADHD.

Key words: social cognition, executive dysfunction, ADHD, oxytocin