

# Neurological Soft Signs and Cognitive Functions in Obsessive Compulsive Disorder

Ahmed A., Nasreldin M. and Fathy H.

Lecturer of Psychiatry, Cairo University, Egypt.

Date received: 12/10/2010

Date accepted: 28/3/2011

**Background:** To verify the presence of neurological soft signs in patients with obsessive compulsive disorder (OCD) and their relation to cognitive functions and different clinical variables.

**Subjects & Methods:** Two groups were compared in the study: 30 OCD patients and 60 healthy subjects as control. Yale-Brown Obsessive Compulsive Scale, Rey-Osterrieth Complex Figure and Cambridge Neurological Inventory were applied to

the 2 groups after full psychiatric and neurological examination.

**Results:** OCD patients showed higher scores of neurological soft signs that were related to severity of OCD, worse cognitive functions and the dimension of contamination-cleaning.

**Conclusion:** Neurological soft signs would provide an idea about severity of OCD, cognitive dysfunctions in OCD and the sub-typing of OCD.

**Keywords:** NSS, OCD, Cognitive functions.

## Abbreviations:

OCD: Obsessive Compulsive Disorder

NSS: Neurological Soft Signs

RCFT: Rey-Osterrieth Complex Figure Test

CNI: Cambridge Neurological Inventory

YBOCS: Yale-Brown Obsessive Compulsive Scale

Egypt. J. Psychiatry, May 2011; 32(2): 9-14

## INTRODUCTION

Obsessive Compulsive Disorder (OCD) is unique among the anxiety disorders by appearing to be much more dominated by cognitive and related complex behavioral symptomatology (Kay and Tasman, 2006) cognitive and these deficits in OCD for example: visuospatial memory and verbal fluency (Roh, et al. 2005). Dysfunction in the neurocircuitry between the orbitofrontal cortex, caudate, and thalamus in patients with OCD has produced by positron emission tomography (Pujol, et al. 2004).

Neurological soft signs (NSS) are minor motor and sensory abnormalities that are present normally in the course of early development but considered abnormal when present beyond childhood and lack definitive localizing significance. Soft signs are indicative of subtle brain dysfunction. They have been reported with increased frequency in a variety of psychiatric disorders including schizophrenia and sociopathy (Mergl and Hegerl, 2005).

Many studies done on OCD patients' revealed higher scores of NSS in these patients in comparison with healthy controls. (Hollander, et al. 1990). Excess of NSS in OCD patients was associated with more severe obsessions as well as disturbance of visuospatial and visual memory (Mergl and Hegerl, 2005). Interpretation of soft signs in OCD patients raises several questions, including whether these findings are specific for anxiety disorders or are merely a marker for psychiatric dysfunction in general, and whether soft signs may be indicative of comorbid psychiatric illness in OCD patients (Anderson and Savage, 2004).

## AIM OF THIS STUDY

To find out the presence of NSS in OCD patients and its relation with the severity of symptoms and the presence of cognitive deficit namely: visuospatial abilities and non-verbal memory.

## SUBJECTS AND METHODS

### Participants:

This study was designed as an outpatient cross-sectional comparative study after approval of the ethical research committee that conforms to the provisions of the world medical association's Declaration of Helsinki. The total sample of the study consisted of 90 subjects who were selected using a systematic random statistical procedure. According to this procedure, 2 days of the week were allocated over 6 months, from 27/2/2009 to 12/8/2009 and the sample consisted of consecutive referral, divided into two groups, OCD patients group (n= 30) and normal control group (n= 60). All subjects included in this study were randomly selected from Kasr El-Aini Outpatients Psychiatric Clinic and fulfilled the general inclusion and exclusion criteria. Patients were drug naive and if on therapy, patients should be medication free for at least three to four weeks. All patients gave consent to participate in the study after full explanation of procedures was provided. Patients' ages ranged from 15-50 years and were diagnosed according to DSM-IV. The general exclusion criteria: Age below 15 or above 50, mental sub-normality clinically, evidence of organic brain disorder, associated substance use disorder, associated or history of