Correlating plasma levels of clozapine with the risk of developing obsessive-compulsive symptoms

M. Roldan[1,2], M. Martinez vL[3]

1. Institut de Neuropsiquiatria i Addiccions, Parc de Salut Mar, Barcelona, Spain.
2. Institut Hospital del Mar d'Investigacions Mèdiques-IMIM, Parc de Salut Mar, Barcelona, Spain.
3. Hospital de Mataró, Consorci Sanitari del Maresme, Barcelona, Spain

Poster Number:
P1-042

Introduction

The prevalence of obsessive-compulsive symptoms (OCS) in schizophrenic and schizoaffective patients is higher than in general population (1),(2). There is higher frequency and greater severity of OCS in patients treated with antipsychotics with predominant anti-serotonergic profile. Clozapine (CLZ) is the medication more frequently associated with the second-onset OCS (3),(4).

Objectives

To describe the correlation between plasma levels of clozapine (Cpl) and the presence of OCS in a sample of schizophrenic and schizoaffective patients.

Methods

The electronic records of a sample of 45 schizophrenic and schizoaffective patients treated with CLZ and followed in two outpatient clinics in Catalonia were selected. A retrospective descriptive study of the database was performed.

Results

45 patients were selected, 10 (22.2%) had OCS (Fig. 1). The majority of the patients were males (80.0%) and Spanish (95.5%). The mean age was 41.5 years. The Cpl were higher in patients with OCS than in those without (470.6 ± 180.5 vs 381.4 ± 207.3) even though the dose of CLZ was similar among both groups (343.7 ± 227.4 in OCS patients vs 340.4 ± 161.2 in non-OCS patients) (Fig. 2). Noteworthy, the p-value shows no significance (p>0.05).

Fig. 1. Patients treated with Clozapine and OCDS

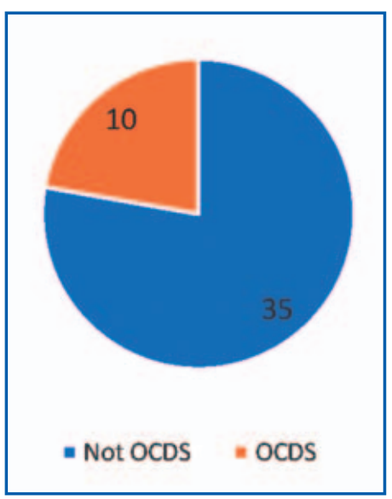
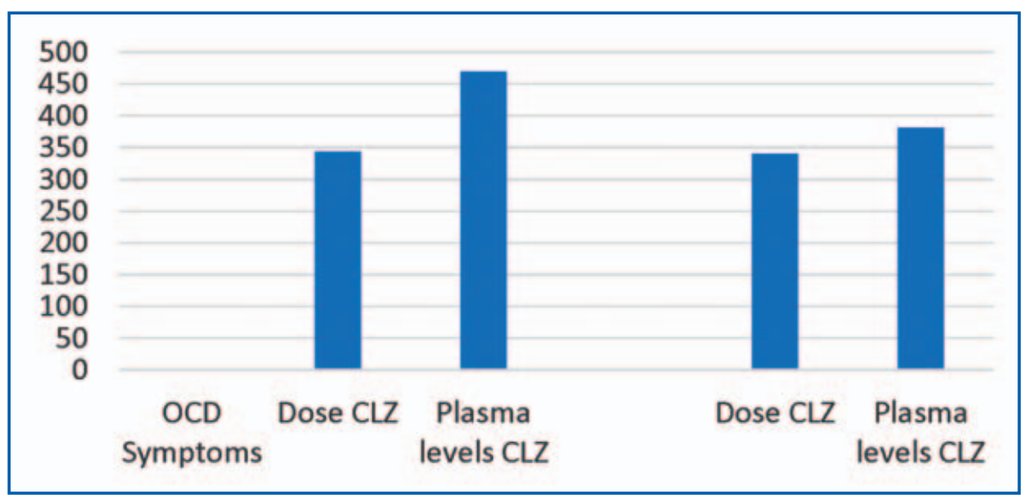


Fig. 2. Dose of Clozapine related to Clozapine levels and OCDS



Discussion

We couldn't find any significant difference in Cpl between both groups, this could be due to the small size of our sample. Comparing our results to the literature, we found heterogenous results: some studies support a positive correlation between Cpl and the presence and severity of OCS (4) and others don't (2). We think that having a laboratory threshold that warn the clinician about the possibility of developing OCS could be very useful. Adequate recognition of OCS in schizophrenia could avoid additional suffering as it may respond well to treatment. Further research is needed to understand the correlation, the mechanism and the pathophysiology underlying this comorbidity.

References

(1) Leung,JG,Palmer,BA.(2016). Psychosis or Obsessions?Clozapine Associated with Worsening Obsessive-Compulsive Symptoms. Case Rep Psychiatry.

(2) Fernandez-Egea,E.,Worbe,Y.,Bernardo,M.,&Robbins,T.W.(2018). Distinct risk factors for obsessive and compulsive symptoms in chronic schizophrenia. Psychological Medicine, 1–8.

(3) Grillault Laroche, D.,&Gaillard,A.(2016). Induced Obsessive Compulsive Symptoms (OCS) in schizophrenia patients under Atypical 2 Antipsychotics (AAPs): review and hypotheses. Psychiatry Research, 246, 119–128.

(4) Schirmbeck,F.,&Zink,M.(2013). Comorbid obsessive-compulsive symptoms in schizophrenia: contributions of pharmacological and genetic factors. Frontiers in Pharmacology, 4, 99.

Acknowledgments: No conflicts of interest were reported.