empowerment were measured with CSQ-8 [4] and BUES [5] scales respectively.

Results: Patients' acceptance of m-RESIST ranged from moderate to high, with a mean score for perceived use and ease of use 5.16 and 5.36, respectively. Patient's satisfaction was generally good, 57% thought that the quality of service was good or excellent, 65% reported having received the services they wanted and 43% thought that the program met their needs. However, 19% did not get the kind of service they wanted and for 38% only few of their needs were met. 78% of the sample reported overall satisfaction with m-RESIST and 70% would use it again. Regarding user experience, patients indicated that m-RESIST facilitates easier and quicker communication with clinicians. Also the feeling of having a clinical team concerned and involved in their wellbeing made patients feel more protected and safe. Caregivers were unanimous about the sense of security and also reported that there was more and better support for patients and a better follow-up. Clinicians reported that the m-RESIST system was easy and intuitive to use and felt that it opened up a new communication pathway with their patients. Out of a possible score of 4, which indicates a high level of empowerment, the result of empowerment in our patients was 2.76. Mean for dropouts was 20%.

Conclusions: The m-RESIST solution was well accepted by patients, caregivers and clinicians in terms of acceptability, usability and satisfaction. These results offer an encouraging starting point concerning mHealth technologies in TRS patients, involving clinicians and caregivers.

Disclosure statement: m-RESIST project is founded by Horizon 2020 Framework Programme of the European Union. Co-financed with European Union ERDF Funds. The authors listed in this abstract are only a part of the m-RESIST Group.

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doi: 10.1016/j.euroneuro.2018.11.1091

P.096 Which subjectively perceived side-effects occur the most in high-dose clozapine use?

I. Ristic[1,*], D. Ignjatovic-Ristic[2], D. Cohen[3], J. Jovic[4]

[1] *University of Belgrade- Faculty of Medicine, Epidemiology, Belgrade, Serbia*
[2] *Faculty of Medical Sciences- University of Kragujevac, Psychiatry, Kragujevac, Serbia*
[3] *Mental Health Care North-Holland North, Community Mental Health, Heerhugowaard, The Netherlands*
[4] *University of Pristina, Faculty of Medicine, Kosovska Mitrovica, Serbia*

Background: Awareness of severe clozapine side-effects is an important factor for good therapeutic alliance and for prevention of treatment discontinuation. Professionals worry the most about agranulocytosis and routine blood screening, while patients are mainly concerned about physical symptoms, such as hypersalivation and sleepiness [1,2].

While the life-threatening side effects are dose independent and typically occur during the initial phase, the more common, non-lethal side effects,can occur at all times during clozapine treatment.

The Glasgow antipsychotic side-effects scale for clozapine (GASS-C), developed for measurement of subjective side-effects has been validated in clozapine-treated in- and outpatients [3].

The aim of our study was to investigate whether subjectively perceived clozapine side-effects are dose-dependent.

Methods: A demographic questionnaire and GASS-C were given to 95 participants who fulfilled the diagnostic inclusion criteria (age>18, diagnosis of schizophrenia, schizoaffective disorder or unspecified nonorganic psychosis according to ICD-10, and an ongoing treatment with clozapine for at least 7 days). The GASS-C version used in this study contained 16 questions and for each side effect of clozapine, patients noted how often hey had experienced it in the past week (0-never, 1-once, 2-a few times, 3-everyday). Total scores were separated as: 0-16 absent or mild side effects, 17-32 moderate, and 33-48 severe side effects. The participants were instructed to tick a box if they felt a symptom was particularly distressing, no matter how often it occurred. Dosage of clozapine was assessed through patient medical charts. Partial correlation was used to determine how much clozapine doses correlated with the intensity of side effects, controlling for gender and age.

Results: Sample consisted of 53.7% male subjects, mean age 46.11±11.61, diagnosed as: F20 (76.8%), F29 (14.7%), F25 (8.4%). Clozapine doses ranged from 25-425mg/day (M=158.16±98.47). Fourty-five patients (47.4%) received another antipsychotic together with clozapine. There was a weak correlation between mean clozapine dose and sexual issues ($r=.23$, $p<0.05$), hypersalivation ($r=.25$, $p<0.05$), as well as total GASS-C scores ($r=.22$, $p<0.05$), and moderate correlation between mean clozapine dose and obstipation ($r=.30$, $p<0.05$).

Conclusion: We found a significant correlation between several distressful side effects and mean clozapine dose. Other studies have shown conflicting reports on this correlation – Yusufi et al. [4] found a reduction of side effects

when reducing doses of clozapine, but the study of Hynes et al. [3] did not find any correlation between these two variables. Although they are not life-threatening, the importance of these side effects should not be underestimated as they can lead to treatment cessation. A limitation of our study is that no therapeutic drug monitoring took place, so therapy (in-)compliance could be a potential explanation for the weak to moderate correlation coefficients we found. Also, antipsychotic polypharmacy was not corrected for, which should be rectified in future studies. Furthermore, additional research is needed to explore the link between patients' reported adverse effects, mean clozapine doses and clozapine serum concentrations.

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doi: 10.1016/j.euroneuro.2018.11.1092

P.097 Hippocampal structural alterations and neurocognitive performance in the bipolar-schizophrenic spectrum

T. Toffanin [1,*], A. Miola [1], B. Salvati [1], C. Idotta [1], G. Pigato [1], H. Follador [2], N. Martino [3], A. Baratto [3], N. Scupola [4], G.I. Perini [4]

[1] *University-Hospital of Padova, Neurosciences, Padova, Italy*
[2] *Ulss 2, Psychiatry, Conegliano, Italy*
[3] *Ulss 2, Radiology, Conegliano, Italy*
[4] *Casa di Cura Parco dei Tigli, Psychiatry, Padova, Italy*

Background: A certain number of genetic, epidemiologic, neurocognitive and MRI studies indicates a partial overlap between alterations found in schizophrenia and bipolar disorder, suggesting that these disorders belong to the same spectrum and that they are heterogeneous expressions of the same pathophysiologic process [1]. Hippocampal formation seems to play a crucial role in the bipolar-schizophrenic pathophysiology, especially in the cognitive functions modulation [2,3]. Nevertheless, there are lacking data about the hippocampal gray and white matter impairment simultaneously, so far studied separately only, and neurocognitive dysfunction in patients with bipolar-schizophrenic spectrum disorders [4]. The development of a multimodal model, which investigates both white and gray matter simultaneously and the neurocognitive disfunction, could help to clarify the pathways that contribute to the spectrum.

Aim of the study: The current study aims to explore the presence of structural and microstructural alterations of hippocampal gray and white matter in a sample of schizophrenic and bipolar patients compared to a healthy controls, and evaluate the trend of these alterations in the different subgroups. We analyze the presence of alterations in schizophrenic and bipolar patients and the possible correlation between hippocampal structural alterations and neurocognitive performance in both groups, in order to improve the knowledge of the pathophysiological basis of the bipolar-schizophrenic spectrum.

Materials and methods: We recruited a sample of 34 patients (18 male and 16 female) suffering from different early-onset disorders throughout the bipolar-schizophrenic spectrum, comprising bipolar type I disorder (n=11) and schizophrenia (n=23), and 17 healthy control subjects. All subjects underwent a multimodal magnetic resonance imaging including T1-weighted 3D volumetric and Diffusion Tensor Imaging (DTI) sequences. Hippocampal gray matter volumes and the diffusion index (FA and ADC) were calculated. The analysis of the data was carried out using the semiautomatic Analyze 10.0 software. All patients underwent clinical and neuropsychological assessment.

Results: We found a significant reduction of hippocampal gray matter volume in both schizophrenic and bipolar patients ($p<0,05$) in comparison with healthy controls. In patients with schizophrenia we observed alterations in right hippocampal FA and ADC and in left hippocampal ADC, whereas in patients with bipolar disorder we found only an increase in left hippocampal ADC. Both groups showed lower neurocognitive performance in comparison with healthy controls. We found significant correlations between different neurocognitive scores and hippocampal structural and microstructural alterations in the patient sample, but the correlation was stronger in the single patient groups. We observed only weak correlation between hippocampal volumetric or diffusion changes and clinical scores (BPRS, YMRS e VGF).

Conclusions: Schizophrenia and bipolar disorder seems to have an overlapping pattern of neurocognitive impairment and hippocampal structural and microstructural alterations. White matter impairment seems to depend on the age and the duration of illness, supporting the hypothesis of white matter neuroprogressive changes in schizophrenia and bipolar disorder. These results could help to better understand the complex pathophysiological process underlying bipolar-schizophrenic spectrum disorders.

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