EPP1214
Perceived stigma and burden in natural caregivers of patients with schizophrenia

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Introduction: Natural caregivers of patients with schizophrenia are often subjected to stigma by virtue of their association with patients. Affiliate stigma expose caregivers to community rejection, isolation and may have a negative impact on their psychological wellbeing.

Objectives: This study aimed to assess perceived stigma and burden in a Tunisian population of natural caregivers of patients with schizophrenia and to identify risk factors for developing such disorders.

Methods: We conducted a cross-sectional, descriptive and analytical study, including 80 natural caregivers of patients with schizophrenia. We used the Stigma Devaluation Scale (SDS) to assess stigma and the Zarit Burden Interview (ZBI) to evaluate burden.

Results: The average age of natural caregivers was 55.7 years. The sex ratio (M/F) was 0.86. The mean score of perceived stigma in patients was 24.7. That of perceived stigma in caregivers was 15.34. Assessing the burden on caregivers estimated an average score of 58, corresponding to a severe burden. Medium to high burden was found in 78% of participants. Perceived stigma scores were significantly higher among illiterate caregivers, those linking schizophrenia to hereditary causes, among parents, and in case of daily contact with the patient. Scores of perceived stigma in caregivers were also significantly correlated with burden score.

Conclusions: Natural caregivers of patients with schizophrenia are exposed to affiliate stigma and experience an important level of burden. Our findings emphasize the need to support natural caregivers of persons with schizophrenia and to develop strategies to combat stigmatization among patients as well as their natural caregivers.

Keywords: schizophrenia; Natural caregiver; Stigma; Burden

EPP1213
The effect of cariprazine on patient engagement: Post-hoc analysis of a phase 3 study in patients with predominant negative symptoms of schizophrenia

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Introduction: Motivation deficit is a significant aspect of lack of improvement in patients with schizophrenia especially with predominant negative symptoms (PNS). Therefore, improvement depends not only on symptoms reduction and better social functioning but also on patient engagement which is a key but less investigated aspect of successful treatment.

Objectives: To investigate and compare patient engagement in PNS patients after cariprazine and risperidone treatment characterized by the 11 items of the Positive and Negative Syndrome Scale (PANSS-11).

Methods: In this phase 3 study patients suffering from PNS of schizophrenia (PANSS-FSNS≥24) were randomized to 26 weeks of treatment with either cariprazine or risperidone (target dose 4.5 and 4 mg/day, respectively). To compare the effects of the two drugs on patient engagement the PANSS-11 scale was used. Change from baseline (CB) on the selected items and PANSS-11 total score were analyzed using mixed model of repeated measures approach without correction for multiplicity.

Results: PANSS-11 total score mean CB were -11.20 (SD=0.43) for cariprazine- and -9.44 (SD=0.45) for risperidone-treated patients with a -1.79 (95% CI=-3.01, -0.56) mean difference (p=0.004) in favor of cariprazine. Most item differences were statistically significant (N1, N2, N3, N4, N5, G16) or numerically higher (N6, G7, G13) for cariprazine versus risperidone.

Conclusions: Cariprazine significantly improved patient engagement in patients with PNS of schizophrenia compared to risperidone based on the PANSS-11 post-hoc analysis. These results suggest that cariprazine treatment may improve not only the symptoms and everyday functioning of PNS patients but their engagement with life.

Conflict of interest: Studies were funded by Gedeon Richter Plc. and Allergan Plc (prior to its acquisition by AbbVie). Dr. Laszlovszky, Dombi, Balogh, Dr Barabassy, Dr Vass, Dr. Szatmári and Dr. Németh are employees of Gedeon Richter Plc.

Keywords: Cariprazine; schizophrenia; patient engagement; negative symptoms

EPP1214
Safety during polypharmacy: A post-hoc examination the safety profile of cariprazine with other antipsychotics in the cross-titration phase

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Introduction: Although monotherapy is preferable, in every day clinical practice polypharmacy is often unavoidable due to the need of treatment enhancement or cross-titration phases with shorter or longer overlaps of two or more drugs. However, administration of more than one drug treatment is often associated with more side effects.

Objectives: The aim of the present post-hoc analysis was to examine treatment emergent adverse events (TEAEs) during co-administration of cariprazine with other antipsychotics.

Methods: Treatment emergent adverse event data (TEAE) from a randomized, double-blind, parallel-group, active-controlled study (EudraCT Number: 2012-005485-36) in adult patients with schizophrenia having predominant negative symptoms was examined in the first two weeks of the double-blind treatment period, where gradual cross-titration occurred between cariprazine (3-6 mg/day) and other antipsychotics (including amisulpride, aripiprazole, fluphenazine, haloperidol, olanzapine, paliperidone, quetiapine, and sertindole). Thereafter, 24 weeks of cariprazine monotherapy followed.

Results: During the cross-titration period, 17.83% of patients experienced at least one TEAE. The TEAEs were in line with the well-established safety data: nausea (2.61%), insomnia (2.17%),
headache (2.17%), akathisia (1.74%) and restlessness (1.3%) were the most common. Most events were mild in severity (66.1% mild, 32.2% moderate, 1.7% severe (insomnia)).

**Conclusions:** While not definitive, and limited by small sample size, the co-administration of cariprazine with other antipsychotics did not show an unexpected safety profile or overlapping toxicities. This is an important finding, if intermittent or longer co-administration of other antipsychotics are unavoidable with cariprazine treatment.

**Conflict of interest:** Studies were funded by Gedeon Richter Plc. and Allergan Plc (prior to its acquisition by AbbVie). Dr Vass, Dr Barabássy, Dr Laszlóvázy, Dr Sebe, Dombi, Dr Szatmári and Dr Németh are employees of Gedeon Richter Plc.

**Keywords:** Cariprazine; schizophrenia; polypharmacy; safety

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**EPP1215**

**Multivariate approach to identify electrophysiological markers for diagnosis and prognosis of schizophrenia**


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**Introduction:** Different electrophysiological indices have been investigated to identify diagnostic and prognostic markers of schizophrenia (SCZ). However, these indices have limited use in clinical practice, since both specificity and association with illness outcome remain unclear. In recent years, machine learning techniques, through the combination of multidimensional data, have been used to better characterize SCZ and to predict illness course.

**Objectives:** The aim of the present study is to identify multimodal electrophysiological biomarkers that could be used in clinical practice in order to improve precision in diagnosis and prognosis of SCZ.

**Methods:** Illness-related and functioning-related variables were measured at baseline in 113 subjects with SCZ and 57 healthy controls (HC), and after four-year follow-up in 61 SCZ. EEGs were recorded at baseline in resting-state condition and during two auditory tasks (MMN-P3a and N100-P3b). Through a Linear Support Vector Machine, using EEG data as predictors, four models were generated in order to classify SCZ and HC. Then, we combined unimodal classifiers’ scores through a stacking procedure. Pearson’s correlations between classifiers score with illness-related and functioning-related variables, at baseline and follow-up, were performed.

**Results:** Each EEG model produced significant classification (p < 0.05). Global classifier discriminated SCZ from HC with accuracy of 75.4% (p < 0.01). A significant correlation (r=0.40, p=0.002) between the global classifier scores with negative symptoms at follow-up was found. Within negative symptoms, blunted affect showed the strongest correlation.

**Conclusions:** Abnormalities in electrophysiological indices might be considered trait markers of schizophrenia. Our results suggest that multimodal electrophysiological markers might have prognostic value for negative symptoms.

**Keywords:** schizophrenia; EEG; machine learning; negative symptoms

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**EPP1216**

**Risk factors for psychotic relapse in chronic schizophrenia after dose-reduction or discontinuation of antipsychotics. A systematic review and meta-analysis**

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**Introduction:** Patients are often treated with high doses or combinations of antipsychotics, which may hamper recovery. Dose-reduction (DR) or discontinuation of antipsychotic medication in chronic patients carries the risk of psychotic relapse.

**Objectives:** To identify risk factors of psychotic relapse after DR or discontinuation, we (i) determined the rate of relapse after DR or discontinuation in patients with chronic schizophrenia, and (ii) assessed risk factors for psychotic relapse.

**Methods:** From studies on dose-reduction from January 1950 through June 2019 we calculated event rates per person-years including 95% confidence intervals. We extracted: (1) patient characteristics (age, percentage of male subjects, setting, duration of illness), (2) dose-reduction/discontinuation characteristics (start-dose, end-dose, dose-reduction in milligrams and percentage of start-dose, time-period of dose-reduction), (3) follow-up characteristics (time after dose-reduction), and (4) study characteristics (blinding, publication-year and relapse definition).

**Results:** 46 unique cohorts, presenting 1677 patients in which doses were reduced/discontinued were included in meta-analysis. We found an overall event rate per person-years on psychotic relapse of 0.55 (CI95% 0.46-0.65;p<0.0001;I2 =79). Most robust event rates for psychotic relapse were seen for discontinuing antipsychotics, and if not discontinuing, dose-reduction till under 5mg haloperidol equivalents daily (HE). Abrupt reduction yielded higher rates than gradual reduction. During short follow-up time more relapses occurred than in studies with long follow-up time.

**Conclusions:** In patients with chronic schizophrenia discontinuing, and to a lesser extent DR till end-dose<5mgHE, patients who reduce doses abrupt, inpatients, and patients with a short duration of illness carry highest relapse risk. Most relapses occur during the first half year after DR.

**Keywords:** dose reduction; Relapse; Risk factors; meta-analysis