

domains, its clinical phenotype can be subdivided into positive and negative symptoms, and those of cognitive impairment. As the knowledge base behind the social and environmental origins accumulates, the etiological and neuropathophysiological mechanisms behind them remain elusive.

**Objectives:** To review the latest developments in potential etiological hypotheses linked to schizophrenia.

**Methods:** A non-systematic review was performed, searching Pubmed for articles published between the years of 2019 and 2020.

**Results:** (1) Common genetic variants alter brain glycosylation and may play a fundamental role in the development of schizophrenia. The strongest coding variant in schizophrenia is a missense mutation in the manganese transporter SLC39A8, which is associated with altered glycosylation patterns in humans, resulting in modification of a subset of schizophrenia-associated proteins. (2) Failure of oligodendrocytes and astrocytes to differentiate contributes to several of the key characteristics of schizophrenia, including hypomyelination and abnormalities in glutamate and potassium homeostasis. (3) Diglossia was hypothesized as a risk factor, as it could constitute a neurodevelopmental insult. This relationship may be mediated by the reduced lateralization of language in the brain. (4) The first brain-wide resting state effective-connectivity neuroimaging analysis proposed going beyond the disconnectivity hypothesis, drawing attention to differences between back projections and forward connections, with the backward connections from the precuneus and posterior cingulate cortex implicated in memory stronger in schizophrenia.

**Conclusions:** These novel insights may be a promising step in the right direction, presenting not only new approaches towards the complex pathogenesis of schizophrenia, but also eventual early interventions.

**Disclosure:** No significant relationships.

**Keywords:** schizophrenia; Hypothesis

## EPV0600

### Psychosis and homicide

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**Introduction:** Violence and crime committed by individuals with mental disorders has been the focus of growing interest among mental health professionals. Added to psychopathological disorders, individual, socio familial and therapeutic factors can be involved in the criminogenic risk.

**Objectives:** To assess the characteristics of homicide in Tunisian patients with psychosis and to establish their sociodemographic, clinical and therapeutic characteristics.

**Methods:** We reported 7 cases of patients who attended Psychiatric department "A" at the Hedi Chaker university hospital in Sfax, Tunisia, between January 2014 and September 2019. They were hospitalized for committing homicide and penal irresponsibility was recognized.

**Results:** The homicide acts were matricide in 3 cases, parricide in one case and conjugal homicide in one case. The homicide was not premeditated, committed by using knife weapon in 3 cases and a blunt object in 4 cases. The crime was done in the family home in the majority of cases (71.42%). The average age of patients was 34 years.

They were in almost cases (85.71%) male. Six patients (85.71%) had very low educational and income levels. They were mostly unmarried (71.42%) and unemployed (71.42%). Alcohol consumption was observed in 3 patients. However, we did not find any substance use. According to DSM-5, six patients were diagnosed with schizophrenia and one case with schizoaffective disorder. The majority (85.71%) had previous psychiatric follow-up. Furthermore, interruption of treatment was the rule. Five patients had a previous record of violent behavior towards the victim. Judicial history was notified among one patient. The persecution and influence delusion were found among 6 cases.

**Conclusions:** Homicidal behavior is extremely rare. Evaluation of different variables of homicide's act and offender is a fundamental issue for developing preventive and therapeutic strategies to deal with such criminal behavior.

**Disclosure:** No significant relationships.

**Keyword:** homicide-crime-violence-psychosis

## EPV0601

### Combined use of clozapine and cariprazine in treatment-resistant schizophrenia, is it a good choice?

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**Introduction:** Treatment-resistant schizophrenia (TRS) affects 30% of people with a diagnosis of schizophrenia, and is defined as nonresponse to at least two trials of antipsychotic medication of adequate dose and duration. Clozapine is the only evidence-based treatment for TRS. Cariprazine may be considered significantly more efficacious than risperidone in improving negative symptoms of schizophrenia.

**Objectives:** To describe the experience of using cariprazine in combination with clozapine in patients with refractory schizophrenia and negative symptoms.

**Methods:** Qualitative design. We present a case report study of a 47-year-old male with a diagnosis of TRS, treated in our outpatient mental health clinic for twenty years. The patient experiences crystallized delusional ideas of harm, self-referential, paranoid and mystical-messianic content, phenomena of theft and thought reading, egodystonic auditory hallucinations. No substance use disorder was observed. He made several suicide attempts in the context of intense suffering and psychotic anguish. Clozapine 400mg/day was instituted after no response to treatment with amisulpride, paliperidone, olanzapine or aripiprazole. The intensity of positive symptoms was reduced (experiences of damage, commenting and insulting auditory hallucinations, self-referentiality), as well as the emotional and behavioral repercussions. Persistent negative symptoms appeared such as apathy, abulia, clinophilia, anergy, social isolation, affective flattening, impairing his functionality.

**Results:** Neuroimaging and periodic blood tests results were normal. Oral cariprazine was added in ascending doses up to 4.5mg with good tolerance. The patient showed remission of apathy, enhancement of behavioral activation, socialization and motivation to perform occupational activities.

**Conclusions:** Combinations of clozapine with partial agonists may improve the quality of life in refractory schizophrenia.