

# Posters & images in neuroscience

## *Violence in schizophrenia*

*There is nothing more terrifying than unpredicted violence. Patients with mental illness sometimes commit bizarre, unexplained, and arbitrary acts of violence, which often provoke media attention. Recent, well-designed, large-scale studies controlling for the sociodemographic factors associated with violence in the general population show a significant, albeit modest, increased prevalence of violence in mental illness compared with the general population.<sup>1</sup> Although the vast majority of violent acts in today's society are not related to mental illness and a great majority of patients with schizophrenia have never been violent, studies have confirmed a relationship between schizophrenia and violence. The consequent stigma attached to the disease has negatively influenced both patients with schizophrenia and their relatives alike.*

### Where is the evidence?

Controlled studies in arrested offenders, inpatients, outpatients, and families with a mentally ill member, epidemiological surveys, and longitudinal cohort studies all report a relationship between violence and schizophrenia. The relationship decreases, but remains highly significant, after controlling for sociodemographic factors and history of deinstitutionalization.

### Predicting violence in schizophrenia

When patients have an exacerbation of psychotic symptoms, the risk of violence increases and, therefore, clinical symptoms seem to superficially predict violence. However, it is not simply the presence of psychotic symptoms, but also some of the characteristics associated with them, that best predict violence. The best predictor of violence

#### Predictors of violence common to patients with clinically stable schizophrenia and the general population

- Sociodemographic factors (age, gender, economic status, and unemployment)
- Drug abuse
- Antisocial personality
- Family history of violence
- Previous violence

in schizophrenia, which is common to stable and relapsed populations, is the same as in the general population, ie, previous violence.

In a prospective study, we evaluated several variables in the prediction of violence in 63 inpatients with schizo-

#### Clinical predictors of violence in schizophrenic patients with exacerbation of psychotic symptoms

- Type and characteristics of delusions
  - Delusions causing fear and anguish
  - Persecutory delusions
  - Active seeking of information to confirm or refute the delusional belief
  - Systematization and conviction of the delusion
  - Quality of the hallucinations
- Previous violence
- Less insight into symptoms
- Higher PANSS general psychopathology scores

phrenia.<sup>2</sup> Nurses rated violent incidents using the Overt Aggression Scale. Sociodemographic variables, clinical history, neurological soft signs, community alcohol or drug abuse, and electroencephalographic abnormalities did not differ between violent and nonviolent groups. Violent patients had significantly more positive symptoms, as measured by the Positive And Negative Syndrome Scale (PANSS), higher scores on the PANSS general psychopathology scale, and less insight into the different constructs assessed. In a logistic regression, three variables, ie, insight into symptoms, PANSS general psychopathology score, and violence in the previous week, correctly classified 84.13% of the sample into violent or nonviolent patients. The important finding was that clinical—and therefore amenable to therapeutic approaches—rather than sociodemographic variables were more predictive of violence, hence the importance of compiling this information when assessing a patient

with schizophrenia and evaluating the possibility of a hospital admission. In addition, violence in patients with this disorder has been related to a poorer prognosis, with more admissions to hospital and poorer psychosocial functioning.

### Clinical implications

Psychiatrists should have experience and be trained in issues related to the prediction, prevention, and treatment of violence. Psychotic symptoms have been related to violence irrespective of the psychiatric disorder and even in the general population.<sup>3</sup> Therefore, violence does not necessarily arise from the pathophysiological process of the disorder, but rather from variables such as certain psychotic symptoms and lack of insight into them. In this respect, it has been said that violent behavior seems to be a rational response to an irrational belief.<sup>4</sup> It should be mentioned that some authors have proposed that there are types of chronic, undirected, and low-severity violence in some disorganized and hebephrenic patients that might be related to the organic component of the disease.<sup>5</sup> In fact, these authors suggest that these groups of patients present more neurological signs. The fact that clinical variables amenable to treatment predict violent behavior in schizophrenia posits important practical

#### Approaches to reducing noncompliance

- Use of depot medication
- Patient recognition of need for treatment
- Close monitoring of adherence
- Use of drugs with better side-effect profiles
- Subjective experience

#### Future actions

- Treatment programs that are effective in the prevention of violence
- Investigation of the variables associated with violence that are amenable to therapeutic approaches
- Strategies to increase compliance with treatment, which may translate into a reduction in number of violent episodes and fewer psychotic relapses<sup>2</sup>
- Treatments reducing poor impulse control
- Competent, well-developed community support and comprehensive mental health follow-up to identify and successfully deal with early signs of violent behavior
- Development of validated instruments for assessment of future violence

implications. Medication noncompliance, in many cases secondary to lack of insight, has been related to violent behavior in schizophrenic patients.

*Although there is a significant relationship between violence and schizophrenia, facts should be kept in context, so as to avoid undue pessimism and adding stigma to the disease. Most patients with schizophrenia will never be violent. For every schizophrenic patient who commits a homicide, 100 will commit suicide. Furthermore, schizophrenia increases the likelihood of being the victim of crime and exploitation. A better knowledge of violence in schizophrenia can improve the integral and responsive care that our patients should receive.*

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