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EDITORIAL

Violence and Schizophrenia

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In public perception, schizophrenia is often associated with violence. This view is reinforced each time there are media reports of violent acts by purported mentally ill persons. There has been inadequate scientific attention to this domain of pathology, especially in therapeutic development. This may be changing, and we note that there have been many recent submissions to the Bulletin related to violence, some of which are now available in this issue, the May 2011 issue, and on line.[1–7] Persons with schizophrenia are undoubtedly at increased risk of becoming victims of violence in the community setting, with risks up to 14 times the rate of being victimized compared with being arrested as a perpetrator.[8] Although persons with schizophrenia are more likely to be the victims of violence than to perpetrate violence, the majority of the literature published since 1990 regarding violence in severe mental illness has focused on perpetration rather than victimization. Choe et al[9] found that of studies assessing violence in severe mental illness since 1990, 31 studies focused on perpetration of violence and only 10 studies focused on persons with severe mental illness as the victims of violence. A focus on criminal records substantially underestimates the prevalence of aggressive behavior in schizophrenia, and the burden of caring/coping with aggression, threats of violence, and violent acts falls on family members, clinical care staff, those who share housing, police, and staffs of emergency rooms and jails. As Torrey suggests in this issue, the field may have failed to adequately address violence in part due to our eagerness to reduce stigma by emphasizing that persons with schizophrenia are more likely to be victims than perpetrators.

Schizophrenia is a heterogeneous clinical syndrome and individuals with this disorder will vary extensively on variables related to violent action. Aggressive behavior per se is also heterogeneous in origin, which makes it challenging to deal with both in research and in clinical practice.[4] Clinicians consider many contributory factors in evaluating a patient for risk of becoming violent, including personality traits, history of violent acts, paranoid beliefs, content of auditory hallucinations, substance abuse, impulsivity, suicidal acts, agitation, excitement, social circumstances, and age and sex. Prediction of a singular violent event is very challenging. More commonly, however, the problem relates to a more continuous pattern of hostility, accusatory comments, and verbal aggression that must be dealt with more or less continuously by the closest social group. In the family home, this can create a stressful environment that erodes the quality of life for parents and siblings. It can be very difficult to manage in many living situations leading to altercations with other residents. On the street, in hospitals and in jails, the risk of escalation is great. Therapeutic approaches are often limited. A safe and low stress environment is usually difficult to arrange. Antipsychotic drugs have efficacy for some of the contributing factors, but adherence is a problem. Long acting antipsychotic injections reduce covert nonadherence, but these agents are not used as widely as oral agents. There is not a solid evidence-based approach for hostility and aggression that persists despite treatment except for the data supporting the role of clozapine in reducing hostility. Clozapine has been found to reduce aggression, hostility scores, and violent behavior in published reports. In addition, Swanson et al[10] found that the second-generation antipsychotics clozapine, risperidone, and olanzapine given under usual care significantly decreased violent behavior, while conventional antipsychotics did not have this same affect. However, there is no Food and Drug Administration approved agent for this indication.

The pace of acquiring new knowledge may be increased by identifying a hostility/aggression/impulsivity/violence domain of psychopathology for specific study at each level of the human organization. Instead of drawing inferences from the general study of schizophrenia, investigators may explicitly target this domain. Questions to be addressed may include what genes are associated with the domain, and what molecules, cells, and neural circuits may be addressed in subjects selected according to the domain of pathology, perhaps cutting across diagnostic boundaries as proposed in the National Institute of

Mental Health Research Domain Criteria (NIMH RDoC) initiative.[11] Clinical trials may need to include rather than exclude patients with this domain to determine whether a therapy with efficacy generalizes to this subgroup and/or has therapeutic efficacy for the hostility domain. Since this psychopathology is observed in a number of psychiatric disorders, regulatory bodies might consider granting an indication for a drug with demonstrated efficacy in this domain that is not restricted to schizophrenia. The field should consider whether the focus on unmet therapeutic needs in schizophrenia should extend beyond cognition[12,13] to include a hostility/aggression domain. Pharmaceutical science needs to ascertain which preclinical screening models can predict an antihostility effect in humans. Novel targets may be identified from genomic studies relating to the defining components of the hostility/aggression domain. The field of psychosocial therapeutics is in the best position to determine the most effective ways to help family members or other caretakers minimize stress and develop strategies for coping with potential violence. For patients where violence is associated with thought content, special procedures with cognitive behavioral therapy (CBT) may be developed.

A domain of pathology capturing hostility, aggression, impulsivity, and violence could have been candidate for a dimension in the fifth edition of *Diagnostic and Statistical Manual of Mental Disorders* (DSM5), at least cutting across the psychotic disorders. One of us (W.T.C) involved in the DSM5 process is now surprised that the Work Group did not seriously debate this dimension. For practical reasons, it may not have made the short list, but inadequate consideration may partly be attributed to our wish to avoid issues so directly associated with public misunderstanding and stigma. In this regard, Torrey's At Issue contribution is a challenge to the field and society to better address the problem of violence perpetrated by the mentally ill.

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