Risk of Violence and Psychosis: Does Duration of Untreated Psychosis Matter

Smita Agarkar*, Eleanor Woodward2 and Donna Anthony3
Department of Psychiatry, Weill Cornell Medical College, USA

Abstract
Violence in first episode psychosis presents in variable forms. Most studies have focused on physical aggression and its link to first episode psychosis. There is inconclusive evidence supporting a link between duration of untreated psychosis with violence. Besides only a handful of cases with psychosis could pose a threat for violent behavior. Predictors of violence in first episode psychosis include the presence of depression, anxiety, psychosis, substance abuse, past history of violence and personality disorders. It is important to understand the association between longer duration of untreated psychosis and risk of violence. Improving strategies to mitigate duration of untreated psychosis may help in early identification and treatment and thereby reduce the risk of violence. The purpose of this paper is to highlight risk of violence with untreated psychosis and provide insight into aggression conveyed on Internet sites which often goes unnoticed.

ABBREVIATIONS
ROA: Risk of Aggression; IDPV: Increased Duration of Untreated Psychosis and Violence.

INTRODUCTION
Duration of untreated psychosis (DUP) is defined as the period between the onset of psychotic symptoms and the start of treatment. It is known to influence psychopathology at presentation in first-episode psychosis. But, the direct relationship between violence at presentation and DUP is still unknown. In the US, 1,600 out of 16,000 homicides are committed by mentally ill [1]. Out of these, about 40-50% of patients are untreated [2]. Although only 10% of violent acts or homicides are conducted by psychotic patients [3], current evidence suggests violence in psychotic patients is greater in first episode than later stages of the illness [4]. A systematic review indicated that individuals with schizophrenia and other psychotic disorders were at increased risk of violence when associated with paranoia, persecutory delusions or command auditory hallucinations [5]. In addition, the link with violence and psychosis appears strongest particularly with use of alcohol and other psycho-active substances [5]. In a meta-analysis, homicides during first episode psychosis occurred at a rate of 1.59 per 1000. The annual rate of homicides after treatment of psychosis was reduced to 0.11 per 1000 [6]. Most studies have focused on the risk of violence with physically aggressive behaviors or lethal assault. However more recently, Internet and social media sites have become popular means of communicating aggression.

Recognizing these threats and having early intervention could improve outcomes and reduce the risk of violence.

We present a case of a violent threat on Face book by a young psychotic male. We discuss the possibility of increased risk of violence with longer duration of untreated psychosis.

CASE PRESENTATION
A 22-year-old African American male was brought to a local emergency room by police after his cousin (a law enforcement agent) informed them that the patient had expressed threats of wanting to kill someone at his former college via a Face book message. He was medically cleared and transferred for inpatient psychiatric admission. He appeared thought disorganized, grandiose and paranoid, delusional with the belief that he was drugged at his former college during a “sit and set,” and given a “roofie.” He was unable to explain what he meant by these phrases. He reported his statements were meant to “sue” the school and not “shoot.” He could not explain the written verbatim of the message he posted on Face book in which he expressed thoughts of “wanting to shut down his former college, kill someone at his former college,” to maintain confidentiality exact verbatim of the message is not included. His admission laboratory values were within normal limits and physical exam unremarkable, his urine toxicology screen was negative.

The patient first demonstrated behavioral issues a year (at the age of 21) prior to current admission. Described by parents as a “different personality,” who was more isolated, withdrawn, distancing himself from friends, taking long walks and talking to
himself. At this time he was attending out of state college. There he was involved in a confrontation and spent three days in jail for possession of cannabis. He left college (for unclear reasons) and subsequently returned home. A few months later, he called the police complaining of suicidal ideation and was evaluated in the local emergency room and released with an after care plan which the patient did not follow through. After about eight months he was sent to the emergency room again following an encounter with security on a college campus and was charged with “behavioral misconduct.” It was reported that patient was now enrolled in a local community college. After his release from the emergency room, he was sent for outpatient follow up, prescribed Risperidone, which he refused. A few weeks later, he wrote a threatening Face book message and was arrested and brought in for admission.

On admission, he was started on Risperidone to target his psychotic symptoms and considering his previous suicidal ideation, Lithium was added as an augmenting agent. Even after 6 weeks of treatment with Risperidone and Lithium (lithium level 0.80 mmol/ml), the patient had not made any progress. A decision was made to add another antipsychotic; Olanzapine was added, titrated to 30mg with noticeable improvement in his symptoms. His paranoia about being given a “roofie” at his former college persisted, however patient appeared less distressed by the thought. He never admitted having the urge to kill someone, maintained his stance of wanting to “sue” his college and not “shoot.” He verbalized enough insight not to engage in a threat or act of violence. Considering his lack of insight and risk of noncompliance, IM Risperidal consta long acting depot injection was given prior to discharge. After 2 months of treatment, he was discharged with court mandated outpatient treatment.

**DISCUSSION**

Early detection of psychosis and treatment remains a challenge for mental health professionals. The risk of violence is higher with a longer duration of untreated psychosis (DUP), with our patient’s symptoms manifesting one year before his first hospitalization. Measuring DUP requires establishing both the date on which psychosis first presented and the date on which treatment commenced. Studies have varied in their reports on an average DUP. One study reported an average DUP of 129.9 weeks [7]. In a multicenter trial DUP was more than 6 months on an average in three out of the four geographical locations in the United states [8]. A meta-analysis showed that one third of patients with first episode psychosis commit an act of violence before treatment with one in six patients committing a serious act of violence (either physical or sexual assault) [9]. Poor premorbid functioning, substance abuse, environmental factors and male gender are some of the correlates linked to violence in first episode psychosis [10]. In our case, the patient did not have any behavioral issues during his childhood; however, his male gender, previous use of cannabis and time spent in jail for possession of the drug, are predictors for violent behavior. Although he denied wanting to hurt someone, his message was an explicit threat that led to his arrest and subsequent hospitalization.

In a longitudinal study of drug naïve first episode psychosis patients, DUP along with poor premorbid adjustment significantly predicted level of insight, measured as refusal of treatment at baseline [10]. Collateral information obtained from the patient’s parents revealed that patient was prescribed Risperidone as outpatient but he refused the medication. Delays in seeking treatment were classified by one study as either “help seeking delays” or “health system delays” [11]. Our case could be classified as “help seeking delay” as no further attempts were made by the family to engage him in treatment. Some reports indicate that the presence of affective symptoms is a predictor of good insight [12]. In our case the patient did report suicidal ideation but a lack of other affective symptoms could explain why patient or family did not seek treatment earlier (Table 1).

Fear of stigmatization can lead to longer DUP resulting in poorer outcomes and increased risk for violence [13,14]. In one study, shorter DUP was linked with increased family involvement and help seeking behavior [15]. Although unclear, both social barriers and stigma may have played a significant role in delaying treatment in this individual. Early intervention programs have been shown to improve the prognosis of first episode psychosis by improving insight, increasing medication tolerance and decreasing further relapses [16]. A number of studies suggest that multidisciplinary clinical teams who provided behavior therapies to patients, vocational training, psychoeducation and family therapy, led to less relapses and less hospital admissions in the first eighteen months [17]. The OPUS-Scandinavia study, the largest randomized clinical trial conducted, showed robust findings in patients who received a specialized assertive early invention program for two years [18]. The STEP-ED trial is currently studying whether the positive results in Europe can be replicated in the United States’ more heterogeneous healthcare system [19]. The study will implement public education campaigns, reach out to professional targets and streamline all first episode psychotic patients in the state to the centralized STEP program in an effort to increase detection and rapid referral to proper resources.

Online sites like Face book, blogs, twitter and chat rooms are an integral part of communication among young adults. However

<table>
<thead>
<tr>
<th>Table 1: Strategies to reduce risk of violence with prolonged duration of untreated psychosis.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Increasing vigilance in the community: Including teachers, employers, family, law enforcement officials and mental health professionals in identifying high-risk individuals [2].</td>
</tr>
<tr>
<td>• Using screening methods for early detection in high risk individuals [19].</td>
</tr>
<tr>
<td>• Reducing help seeking delays with improved community integration and understanding social stigmatization [13-15].</td>
</tr>
<tr>
<td>• Reducing health system delays: Increasing involvement of primary care physicians, emergency departments will help identify triggers and recognize early psychotic symptoms or mood changes [11].</td>
</tr>
<tr>
<td>• Improving youth participation: Having outreach programs with “Youth models” to improve engagement of youth in seeking help earlier [22,23].</td>
</tr>
<tr>
<td>• Improving mental health literacy using online technologies and social media [20,24].</td>
</tr>
</tbody>
</table>
most of these sites are unmonitored or unsupervised and hence threats made on these sites may be overlooked. Display of high risk behaviors such as substance abuse, violence and sexual behavior was seen in a study of adolescents with MySpace web profiles [21]. Our case though only speculative highlights the need for vigilance about messages posted on social media sites.

Instead, technology can be used as educational campaigns for broader outreach for mental illness problems. One study showed that more than half of current computer/email and social networks users think that technology encourages socialization and helps patients interact with family and friends [20]. In addition more than half of these same users disagreed that technology made the voices worse, caused paranoia or made them feel depressed or anxious [20]. Using youth-focused online social media experiences may help improve sense of belonging and early engagement in treatment [22,23]. More recently, treatment models like “Headspace programs” in Australia have focused on improving outreach to youth with mental health problems [24].

Longer DUP could increase risk of violence and efforts to decrease DUP can be seen as a modifiable factor. Increasing public awareness, implementing early detection programs using technology, rapidly directing patients to specialized care may be useful approaches to early detection of psychosis. More research needs to be done to have improved and innovative approaches that could reduce duration of untreated psychosis.

REFERENCES

1. Consequences of non-treatment. Eliminating barriers to the treatment of Mental Illness.2010