Asian Journal of Psychiatry 6 (2013) 556–559

Contents lists available at ScienceDirect

Asian Journal of Psychiatry

journal homepage: www.elsevier.com/locate/ajp

Clinical characteristics of aggression in children and adolescents admitted to a tertiary care centre

Preeti Jacob *, Shekhar Seshadri, Satish C. Girimaji, Shoba Srinath, John Vijay Sagar

Department of Child and Adolescent Psychiatry, National Institute of Mental Health and Neurosciences (NIMHANS), India

ARTICLE INFO

Article history:
Received 9 May 2013
Received in revised form 18 July 2013
Accepted 19 August 2013

Keywords:
Aggression
Children
Adolescents
In-patients

ABSTRACT

Background and need for the study: Identification and management of aggression is a major mental health priority in hospitalised patients. However, no such studies have been done in child and adolescent in-patients in India.
Objectives: To study the clinical and demographic features; characteristics of the aggression and methods employed to manage aggression in child and adolescent in-patients.
Materials and methods: Child and adolescent in-patients between the ages of 4 and 16 years who were aggressive were included. The tools used were the MINI-International Neuropsychiatric Interview (M.I.N.I) KID, Overt Aggression Scale (OAS), Children's Global Assessment Scale (CGAS), and a Semi-structured interview regarding each aggressive episode.
Results: 31 patients displayed aggressive behaviour out of the 131 patients who were admitted during the study period. Aggressive acts were more common in males, those with academic difficulties, who had a past history of aggression, with suicidal ideation or suicidal attempts. Aggression occurred across diagnostic categories but a significant proportion was diagnosed to have Disruptive Behaviour Disorders either as a primary diagnosis or as comorbidity. 90.6% were on psychotropic medication prior to admission. Around 2/3rd of aggressive episodes occurred in the evening and family members (85.7%) were the most common targets of aggression.
Conclusion: There are a few factors that can possibly help identify and predict aggression in children and adolescents in a hospital setting. More research is required to understand aggression in clinical settings.

1. Introduction

Aggression is one of the most common reasons for referral to child and adolescent psychiatry services. Aggressive behaviour occurs frequently in child and adolescent in-patient units. Aggression in clinical settings is usually directed towards parents/caregivers, patient-peers, staff members and residents (Connor et al., 1998). In-patient aggression is associated with negative admission outcomes, longer duration of admission and use of more coercive measures such as seclusion and restraint which might be counter-therapeutic (Barton et al., 2001; Ryan et al., 2004; Garrison et al., 1990). Identification and management of in-patient aggression is a serious clinical challenge (Garrison et al., 1990). Successful identification of high risk patients, i.e. those who are likely to display aggressive behaviour enables clinical teams to optimise the therapeutic environment and plan targeted interventions (Vivona et al., 1995). Acute and short term in-patient services are available in select psychiatric and medical institutions in India. The National Institute of Mental Health and Neurosciences (NIMHANS) Bangalore has a one of its kind psychiatric in-patient facility which was established in 1966 and caters to children and adolescents up to 16 years of age. The treating team is multi-disciplinary and employ a biopsychosocial approach in their clinical conceptualisation and management. The in-patient facility provides a structured milieu and expects a parent or caregiver to stay with the child/adolescent in the ward as part of its admission policy. This helps the treating team to observe and improve parent–child interactions. It also helps the family to be involved in the treatment process (Bharath et al., 1997). Data from the year 2002 showed that 30.4% (94) were diagnosed to have Autism Spectrum Disorders, 30.7% (95) with Disruptive Behaviour Disorders (ADHD, ODD, CD) and 34.6% (107) with Psychotic Affective Disorders (BPAD, Schizophrenia, Psychosis NOS) (Prabhuswamy et al., 2008). The above diagnostic profile illustrates the heterogeneity of the patients admitted to the in-patient facility; hence, we wanted to study aggression as a symptom, examine its frequency and characteristics in order to help plan effective management and maintain the therapeutic milieu.

* Corresponding author at: 1479, 20th Main, HSR Layout, Sector 1, Bangalore 560102, India. Tel.: +91 9845325845.
E-mail address: preetijacob@gmail.com (P. Jacob).

1876-2018/$ – see front matter © 2013 Elsevier B.V. All rights reserved.
http://dx.doi.org/10.1016/j.ajp.2013.08.070

2. Material and methods

2.1. Design: Prospective, observational study

2.1.1. Sampling: Consecutive sampling

2.1.1.1. Study site. It is a 40 bedded, exclusive child and adolescent in-patient service, the only one of its kind available in the country. There are 10 nurses round the clock working in three shifts. The nurse to patient ratio was approximately 1:20 assuming full ward strength. There were 10 junior residents, and 3 senior residents posted in the child and adolescent psychiatry services during this period.

Inclusion criteria: Children and adolescents admitted in the Child and Adolescent Psychiatry Centre, National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore between the ages of 4 and 16 years of both sexes who displayed aggressive behaviour in the ward were included in the study. Availability of at least one parent or primary caregiver was required for the study.

2.1.1.2. Tools. The MINI-International Neuropsychiatric Interview (MINI KID), Overt Aggression Scale (OAS), Children's Global Assessment Scale (CGAS), and a Semi-structured interview regarding the aggressive episode were used. Overt Aggression Scale (OAS) was developed by Yudofsky et al. (1986). In this scale, aggression is divided into four types and a weighted score is assigned to each category. The method used to manage the aggression is also recorded. This scale was originally validated in adults but has found good user satisfaction and acceptable correlation with aggression items on the Children's Psychiatric Rating Scale, and reflection of changes associated with drug treatment in a study done in child psychiatric in-patients (Kafantaris et al., 1996). Written informed consent in a language understood by the parent/caregiver was obtained and assent was obtained from the child/adolescent before inclusion into the study. The Institute Ethical Committee approved of the study.

2.1.1.3. Methods. For the purpose of the study, aggression was defined overt behaviour that involved threats of violence or fear inducing behaviour or actions that were intended to hurt, injure or be destructive to self, others, objects or property. Information regarding aggressive episodes occurring in the previous 24 h was obtained from the staff nurse daily, in the evening. The staff communication book is a book maintained by the staff wherein detailed reports of each patient in a particular shift would be recorded and handed over to the staff in the next shift. This was looked into for any events (meeting the definition of aggression considered in this study) and crosschecked with the staff. The staff, parent/primary caregiver and patient were interviewed using above-mentioned tools. The interviews were conducted within 24 h of the incident. The episodes were assessed for their precipitating factors, nature, severity, type of aggression, target of aggression, setting of the aggressive episode and the consequences for the patient and methods used to manage the episode by the staff.

3. Results

119 episodes of aggression were recorded prospectively between February and April 2011 in 31 in-patients, admitted to the Child Psychiatry Centre, NIMHANS. There were a total of 131 admissions of which 86 were boys during that period. The average numbers of episodes were 3.68 (SD 2.53) with a minimum of one episode and a maximum of 10 episodes per patient. 83.9% (26) of the sample were male and 16.1% (5) were female. The mean age was 12.90 years (SD 2.79), with a minimum age of 5 years and a maximum of 16 years. 34.5% (11) of the sample had been admitted previously in this facility. The preadmission characteristics are given in Table 1.

The primary diagnoses of the children/adolescents included in the study are given in Table 2.

3.1. Characteristics of aggression

90.3% (28) displayed more than one episode of aggression in the ward. The mean number of days of admission was 52.51 days (SD 40.82) with a minimum of 3 days and a maximum of 146 days. Longer duration of admission in days significantly correlated with lower CGAS scores (correlation coefficient = −0.310, $p = 0.001$). The characteristics of the aggressive episodes are summarised in Table 3.

3.2. Association between types and severity of aggression with demographic and clinical factors

OAS scores did not differ significantly with respect to gender ($p = 0.080$) and did not correlate with age ($\rho = 0.154$, $p = 0.094$). There was a significant correlation between the number of diagnosis and the verbal aggression ($p = 0.005$) and physical aggression towards self-subscale ($p = 0.011$) of the OAS. Those with multiple episodes of aggression had lower mean CGAS scores with lowest being for the children and adolescents who had more than 5 episodes of aggression. It was difficult to analyse diagnosis with OAS scores as most patients had more than one diagnosis. Children and adolescents who had aggression as a presenting symptom had significantly higher scores on the OAS intervention ($p = 0.005$) and OAS total scores ($p = 0.008$) compared with the group that did not present with aggression. Patients who presented with suicidal ideation had significantly higher scores on certain subscales of the OAS namely physical aggression towards self ($p = 0.001$), physical aggression towards people ($p = 0.031$), OAS intervention scores ($p = 0.013$) and OAS total scores ($p = 0.031$) when compared with children and adolescents who did not report suicidal ideation.

Similarly, the children/adolescents who presented with suicidal attempts had significantly higher scores on certain subscales of the OAS namely physical aggression towards self ($p = 0.001$), OAS intervention scores ($p = 0.016$) and OAS total scores ($p = 0.015$)

Table 1
Pre-admission characteristics ($n = 31$).

Temperament	
Difficult	71% (22)
Slow to warm up	22.6% (7)
Easy	6.5% (2)
Academic difficulties	80.6%
Schooling	
Going to school regularly	9.7% (3)
Not going to school regularly	90.3% (28)
Intelligence	
Normal intelligence	70.9% (22)
Dull normal intelligence	3.2% (1)
Mild mental retardation	19.3% (6)
Moderate mental retardation	3.2% (1)
Severe mental retardation	3.2% (1)
Specific learning disability	29.03% (9)
Relevant past history	
Aggression a presenting symptom	77.4% (24)
Aggression seen in the month prior to admission	100% (31)
Suicidal ideation	48.4% (15)
Suicide attempt	41.9% (13)
Previous admission in this facility	35.5% (11)
Aggression seen in previous admission	100% (11)
On psychotropic medication prior to admission	90.3% (28)