RESEARCH PAPER

Pediatric Psychiatric Emergencies at a Tertiary Care Center in India

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Objective: To describe the clinical profile and pattern of pediatric psychiatric emergency referrals at a tertiary-care center in India. **Methods**: Retrospective chart review of emergency psychiatry records over a 13-month period (January, 2015-January, 2016). **Results**: Pediatric psychiatric emergencies (*n*=65) (mean (SD) age, 14.2 (2.39) y) constituted 10% of all-age psychiatric emergencies. Risk of harm to self and/or others was seen in a third of patients (aggression, 18.5%; self-harm, 16.9%). Common psychiatric diagnoses were dissociative disorder (27.7%), mood disorders (9.3%) and psychotic disorders (7.7%). Compared to adult emergencies attended during same time period, pediatric group had more females (63.1% *vs* 47.4%; *P*=0.02), more patients with dissociative disorders (28.7% *vs* 8.2%; *P*<0.01) and absence of psychotropic medication prescriptions (36.9% *vs* 20.6%; *P*=0.003), while frequency of self-harm and aggression as a reason for presentation was similar to adults. **Conclusion**: The report helps to understand the service needs of younger age group presenting with psychiatric emergencies.

Keywords: *Adolescents, Aggression, Dissociation, Self-harm.*

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Western reports indicate a steady increase in the number of emergency visits for pediatric mental health conditions, constituting 5% of all pediatric emergency visits [1]. Systematic data on emergencies is not available from India, but community-based studies reveal 10-12.5% of those below 16 years of age have a diagnosable psychiatric disorder [2]. Less than 1% of children suffering from mental disorders receive any treatment, reflecting a huge treatment gap. The emergency department (ED) is often the first contact for children and adolescents with a mental health crisis. The recent Indo-US joint working group white paper [3] highlighted the need of academic training for pediatric emergency physicians, including in psychiatric emergencies.

In the Indian context, available studies on psychiatric emergencies [4-6] or pediatric emergencies [7-9] have not focussed on younger age groups or psychiatric emergencies. Other than ED setting, few studies are available from out-patient or ward settings [10,11]. We studied clinical profile and pattern of referrals sought for pediatric psychiatric emergencies presenting to ED of a tertiary-care hospital in India.

METHODS

This paper is based on a descriptive, quantitative analysis through retrospective review of psychiatric emergency records between the months of January, 2015 and January, 2016 (13-month period). The emergency psychiatry services are provided on a round-the-clock basis for all referrals ('calls') made from Department of Emergency Medicine, All India Institute of Medical Sciences, Delhi for known or suspected mental health issues on the discretion of chief medical officer. Psychiatric emergency services are provided in ED by the psychiatric emergency team comprising of a senior resident (psychiatrist) accompanied by a trainee resident and, by consultant on call, if required.

The evaluation is conducted by the psychiatric team with reliance on various informants (child, parents, relatives, police), behavioral observations, and mental state examination. A provisional, consensus psychiatric diagnosis as per the ICD-10 (International Classification of Diseases, tenth revision) is made after rounds and academic discussions between the team (occasionally after evaluating more than once during ED stay), and recorded in a register in a predesigned semi-structured format.The completion of data entries is supervised by one designated faculty member.

Statistical analyses: For the study period, the variables of interest were extracted manually by the study authors. Relevant data was entered into Microsoft excel (version 2013) spreadsheet for building-up the initial dataset. Subsequently, standardized response codes were defined for all variables to arrive at final data-set used for

statistical analysis using SPSS version 23.0 (IBM, USA). Patient confidentiality was maintained by using anonymized data with unique identifiers and by password protected dataset with restricted access.

RESULTS

Of 666 psychiatric emergency referrals attended in total, age data was missing for 19, and pediatric psychiatric emergencies represented 10% (65/647) of remaining referrals.

***Table* I** shows the socio-demographic and clinical profile of 65 pediatric psychiatric patients (63.1% female). Mean age of the pediatric sample was 14.12 (2.39) years, with 38.4% and 53.8% in 11-14 and 15-17 year age-groups, respectively. A medicolegal issue was recorded in 14 (21.5%) cases. Of 14 cases with medico-legal issues, 11 were suicide/self-harm attempts, 2 patients were found wandering and brought by police, and one patient had alleged physical assault and was brought for medical examination.

Table I Pediatric Psychiatric Emergencies (*N*=65)

Characteristic	*No. (%)*
Medicolegal case	14 (21.5)
Known psychiatric illness	18 (27.7)
Comorbid medical illness	10 (15.4)
Reason for referral	
Dissociation	18 (27.7)
Aggression/agitation	12 (18.5)
Self-harm attempt	11 (16.9)
*ICD-10 psychiatric diagnoses**	
Dissociative disorder	18 (27.7)
Schizophrenia and other psychotic disorders	5 (7.7)
Mood (affective) disorders	6 (9.3)
Mental and behavioral disorders due to use of psychoactive substance	1 (1.5)
Anxiety disorders	3 (4.6)
Delirium	3 (4.6)
Mental retardation	2 (3.1)
Others/miscellaneous	8 (12.3)
No psychiatric diagnosis	5 (7.7)
Diagnosis deferred[#]	11 (16.9)
Psychotropic medications prescribed	
Benzodiazepines	25 (38.4)
Antipsychotics	10 (15.4)
Antidepressants	6 (9.2)
None advised	24 (36.9)

**Acute stress reaction and Attention-deficit hyperactivity disorders in 1 child each; [#]pending further evaluation/investigations.*

As compared to adult psychiatric emergency patients seen during the same period [4], this pediatric group had more females (63.1% *vs.* 47.4%; *P*-0.02), higher frequency of dissociative disorders (27.7% *vs.* 8.2%, *P*<0.001), lesser frequency of disorders due to psychoactive substance (1.5% *vs* 13.6%, *P*=0.002), and were more likely not to be prescribed any psychotropic medication (36.9% *vs* 20.6%, *P*=0.03). Antipsychotic medications were prescribed to 10 (15.4%) children.

Further in-patient care/admission was advised in four children (6.2%), of which three (4.6%) were admitted in the psychiatric ward (imminent suicidal risk in one, and inability to manage at home in other two patients) and one in pediatric ward (for organic catatonia).

DISCUSSION

About one-third of the pediatric psychiatric presentations to the ED were due to risk of harm to self/others and only 27.7% had a prior psychiatric diagnosis; 4.6% required psychiatric admission. The presentation for dissociation (27.7%) was also quite common. Often dissociation mimics neurological symptom/s (*e.g.,* pseudo-seizures, dissociative stupor or aphonia), warranting an immediate visit to ED.

In available literature, toxic ingestions/self-harm, aggression or dissociation have been similarly reported as common presentations to pediatric EDs [12,13]. Williams, *et al*. [14] reported 27-month data from regional EDs across Detroit (*n*=225, aged 5-18 years). Thirty-eight percent had severe depression, and 52% were judged to be at acute risk of suicide, 16% had psychotic features, and 34% had potential risk of harming others [14]. In another study from US [15], 21.4% presentations were related to mood disorders, 32.5% to anxiety disorders and 41.3% had substance misuse (41.3%) over the four year review period.

Substance use related emergencies were not much represented in this pediatric sample, in contrast to available literature [13], and in contrast to an adult sample during the same period [4]. Adolescent users are non-dependent with no substantial withdrawals, though they may present with road traffic accidents and fights under influence. It is possible that such cases are not being identified as problematic users, emphasizing the need for screening and brief interventions for early users in EDs. No case of child abuse was encountered in the study period. The child sexual abuse with injuries might have been admitted by surgical specialities, with psychological evaluation at later date. A high index of suspicion is required as child abuse may go unrecognized.

Majority (over 70%) had new-onset symptoms, with no psychiatric diagnosis assigned in past. Such cases pose a diagnostic dilemma especially as diverse medical etio-

WHAT THIS STUDY ADDS?

Majority of the pediatric psychiatric presentations to the emergency department had new onset behavioral symptoms at the time of presentation, and around one-third had a risk of harm to self or for others.

logies may also lead to mental or behavioral symptoms. The pediatricians must take a systematic approach to diagnosis and consider need to involve a psychiatrist for an opinion. A formal psychiatric assessment is warranted for behavioral changes such as irritability, withdrawn behavior, self-harm ideation, aggression, muttering/gesturing to self, especially in absence of 'red flag' signs (*e.g* disorientation, tactile or visual hallucinations, fever *etc*) [12]. The deferred psychiatric diagnosis in nearly 17% patients highlights the diagnostic difficulties, more so in children and adolescents, often requiring multiple, longitudinal assessments.

Limitations of the study include retrospective design, limited generalizability to other settings, and lack of information on subsequent follow-up status. The diagnosis may be provisional in view of need for subsequent evaluations and longitudinal observations. Certain investigations and diagnostic tests may take several days, for which diagnosis was deferred in a few. Further, the study sample is restricted to patients for whom psychiatric team was consulted in ED. Nonetheless, in spite of these limitations, the report provide a large data set of pediatric patients presenting to ED with mental or behavioral symptoms and ICD-10 diagnosis by trained psychiatrists.

The study findings have implications for service delivery aspects. There is a need to train pediatric residents to identify, provide initial management, stabilization and subsequent referral for common psychiatric presentations in ED, especially imminent suicidal risk or violence among children or adolescents in mental health crisis. Additionally, a close liaison is needed between pediatricians and mental health professionals for providing lateral entry points from ED to mental health-care systems.

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