J. Indian Assoc. Child Adolesc. Ment. Health 2006; 2(3): 72-77

Original Article

A Systematic Chart Review of Inpatient Population with Childhood Dissociative Disorder

Mukesh Prabhuswamy, MD, Rajeev Jairam, MD, FRANZP, Shoba Srinath, DPM, MD, Satish Girimaji, MD, Shekhar P Seshadri, DPM, MD.
Address for Correspondence: Dr Mukesh Prabhuswamy, F4, Kabini Hostel, NIMHANS, Bangalore-560029, Karnataka. Fax: +91-80-26564830, +91-80-26562121, email: ypmukesh@gmail.com, ypmukesh@yahoo.co.in

ABSTRACT
Objective: To study the socio-demographic factors, clinical characteristics, and long-term outcome of dissociative disorders in inpatient children and adolescents. **Methods**: Chart data of forty-four subjects (8-15 years) with a diagnosis of dissociative disorder admitted to a specialist Child and Adolescent Psychiatry (CAP) unit between September 2001 and August 2002 were reviewed. **Results**: Eighty-nine percent of the subjects were above 10 years of age, and 61% were females. Difficult or anxious temperament was found in half of the subjects. Precipitating stressors were present in a majority (82%) and half of the subjects had an acute onset of symptoms. Mean duration of illness was 3.6 weeks. The most common symptom was pseudoseizure. Sixty-eight percent of patients had a co-morbid psychiatric diagnosis, the commonest being a depressive disorder. Remission in symptoms was seen in about 80% of subjects at the time of discharge. Two-thirds of the twenty-four subjects available for follow-up had resumed academics and had good global functioning. **Conclusions**: Inpatient children and adolescents with dissociative disorders had an acute onset, with obvious precipitating stressors and had a favourable short- and medium-term outcome. Majority of the subjects had psychiatric co-morbidity. Early diagnosis and presence of precipitating factors determined a favourable outcome.
Key Words: Dissociative disorder, Pseudoseizure, Temperament, Psycho-social factors, Depression.

INTRODUCTION

Clinic-based studies have reported high rates of dissociative disorders in the Indian patients[1-3] when compared to western populations.[4,5] It has been argued that the cross-cultural variation in rates of the disorder is related to the possibility that Indian culture discourages direct expression of emotional distress, and that physical symptoms are a common way of expressing psychological distress.[1] It is important to study these disorders because they cause significant socio-emotional difficulties to children and loss of school days and significant financial and socio-emotional difficulties to caregivers and loss of work days in seeking medical help. On a positive side, studies have shown that Indian children with dissociative disorders appear to have a better prognosis.[1,3]

Some epidemiological studies from India have reported that these disorders are rare. It is possible that these disorders were not picked up because of their transient nature or because of low cultural sensitivity of ascertainment instruments.[6] On the other hand, it is likely that clinic based samples are biased, for example, most cases seen in tertiary child and adolescent psychiatry units are referred cases, are severe, and have comorbidity.

The commonest dissociative symptoms reported in literature are pseudo-seizures, fainting spells and abnormal movements like shaking of the limbs, hyperventilation, hiccups, and unresponsiveness. Rare presentations include aphonia, amnesia, and motor weakness.[7] Outcome of children with dissociative disorders is good though studies are relatively sparse especially in the inpatient population.[8] Younger age at presentation, early diagnosis and intervention, good premorbid adjustment, presence of identifiable stressor, good pediatric liaison, and co-operative child and family are good prognostic indicators; while polysymptomatic, chronic presentation with comorbid psychiatric or medical illness, poor ability to attain insight and serious family pathology are poor prognostic factors.[9-11]

Very few Indian studies have examined the profile and especially the long-term outcome of inpatient children and adolescents with dissociative disorders. This retrospective study was undertaken in order to examine the socio-demographic factors, phenomenological characteristics, and long-term outcome of dissociative disorders in inpatient children and adolescents.

METHODS

This is a retrospective chart-based study. The data was derived from case files of consecutive admissions (children and adolescents below 16 years) to the Child and Adolescent Psychiatry (CAP) service of the National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore, India, between September 2001 and August 2002.

The data of subjects having a chart diagnosis of dissociative disorder according to ICD-10 were reviewed.[12] All children and adolescents presenting to the CAP unit are evaluated in detail using a semi-structured format.[1]. Rutter's penta-axial system is used to record diagnostic information.[13] Chart data include baseline demographic and clinical characteristics (presenting complaints, family history, temperament, past and personal history, general physical examination and investigation details) and follow-up details. Follow-up details in the case records included dissociative symptom status, treatment details and socio-occupational functioning. Return to school was taken as a significant functional outcome measure. A drawback was that limited information was available about the clinical status of the subjects with respect to the co-morbid psychiatric diagnosis in the follow-up notes. In any case no face to face interviews were conducted. Children's Global Assessment Score (CGAS) at baseline (at the time of admission) and at last follow-up was calculated based on information given in the case records.[14] The case records had information on areas necessary to make an assessment of the global functioning, though face to face interviews would have been more reliable.

Subjects had received treatment for dissociative disorders according to the protocols of the CAP unit at NIMHANS, which has been reviewed in an earlier study.[1] It aimed at symptom removal, normalization of daily routine, reduction of secondary gain, family intervention and individual psychotherapy. Treatment methods were neither evaluated nor controlled for in this study.

Clinical characteristics of the sample were studied using frequency analysis and central tendencies. Predictors of outcome were examined using paired samples t-test and chi-square tests. A two-sided $p < 0.05$ was taken as significant.

RESULTS

Data of forty-four subjects with a file diagnosis of dissociative disorder were obtained, giving a one-year inpatient prevalence of 10.14% (total admissions=434). Their demographic and clinical characteristics at baseline and follow-up are given in table 1.

Fifty percent subjects had an acute onset of illness. Most common dissociative symptom was convulsions (pseudoseizure) followed by (subjects with) combination of several symptoms. Eighty-two percent subjects had at least one significant psychosocial stressor. They included financial difficulties, parental discord, school related adversities among others. Thirty-four subjects had school refusal at presentation with 3.9 weeks of school days lost (SD=1.44). Child sexual abuse was reported in two subjects.

Another psychiatric diagnosis was found in 30 (68%) subjects, the commonest being depressive disorder (n=13, 29.5%). The other diagnoses were emotional disorder – unspecified and adjustment disorders (n=8, 18.1%), anxiety disorders (n=6, 13.6%), specific developmental disorders of scholastic skills (n=5, 11.3%), oppositional defiant disorder (n=1, 2.2%), bipolar affective disorder (n=1, 2.2%) and expressive language disorder (n=1, 2.2%).

Table 1: Demographic and illness variables

Characteristic (n = 44)	**Value**
Gender – Female, n (%)	27 (61)
Mean age at presentation (years) #	12 (SD=1.84)
Residence	
• Urban, n (%)	7 (16)
• Semi-urban, n (%)	21 (48)
• Rural, n (%)	16 (36)
Temperament	
• Easy, n (%)	23 (52.3)
• Difficult, n (%)	12 (27.3)
• Slow to warm, n (%)	9 (20.5)
Illness variables	
• Mean duration of illness at presentation (weeks)#	3.6 (SD=1.6)
• Mean duration of hospital stay (weeks)#	3.1 (SD=1.6)
• Precipitating factors present, n (%)	36 (82)
• Referred cases, n (%)	41 (93.2)
• Prior non-psychiatric consultations, n (%)	30 (68)
• Co-morbid medical/or neurological illness, n (%)	22 (50)
• School refusal at presentation, n (%)	34 (77)
Symptom distribution	
• Convulsions (n, %)	16 (36.4)
• Combination of several symptoms (n, %)	12 (27.3)
• Fainting attacks (n, %)	4 (9.1)
• Possession (n, %)	3 (6.8)
• Abnormal movements (n, %)	2 (4.5)
• Hyperventilation (n, %)	2 (4.5)
• Stupor (n, %)	2 (4.5)
• Others (n, %)	3 (6.8)
Treatment and outcome variables	
• Mean CGAS score at baseline#	36 (SD= 6.83)
• Mean CGAS score at follow-up#	68 (SD=7.3)
• Medication prescribed, n (%)	36 (82)
• Number at last follow-up, n (%)	24 (54)
• Mean duration of follow-up (weeks)#	28 (SD=16.3)
• Return to school, n (%)	13 (54) of 24
• Complete remission at last follow-up, n (%)	11 (46) of 24

Mean (SD)

Thirty-five (80%) subjects had symptom remission at the time of discharge. Twenty-four (54%) subjects were regular on follow-up with at least one visit per month till the last follow-up and were functioning well when compared to the time of admission (CGAS scores at baseline and at last follow-up, paired samples t-test, p=0.000). There were no significant socio-demographic or clinical profile differences between the drop-outs and those who were regular on follow-up on factors like age, sex, domicile status, co-morbid diagnosis and outcome at discharge. Thirteen of the 24 subjects (54%) who were available for follow up had resumed schooling immediately after discharge and had full attendance. Data regarding school days lost in the other subjects was not available from the case records.

Demographic factors like age, sex, domicile status, family history, co-morbid psychiatric/ medical disorders and temperament did not influence the outcome. Early diagnosis (diagnosis made within four weeks of onset of illness) (x^2= 17.8, df=1, p<0.01), and presence of precipitating factors (Fisher's exact test, P< 0.05) were associated with a favourable outcome at follow-up (data not shown in table).

DISCUSSION

This study is one of the very few studies with follow-up data on children and adolescents with dissociative disorders. It showed a relatively high prevalence of dissociative disorders in an inpatient population, and a high frequency of psychiatric comorbidity. The commonest co morbid diagnosis was depression as in other clinic based studies.[8]

Contrary to expectations difficult or anxious temperament was found in less than half of the subjects, suggesting that dissociative disorders in children (at least in the Indian context) may occur more as a reaction to stress rather than from a dysfunctional personality.[1,15] Significant parental pathology and school related factors were associated with the diagnosis as seen in other studies.[8,16]

As in previous studies, this study also showed that dissociative disorders in inpatient population had a good short- to medium-term outcome.[1,8,10] Eighty percent of the subjects had remitted at the time of discharge. The average duration of hospital stay of patients was about three weeks, which is similar to that reported in a previous study from the same center.[1] More than fifty percent of the subjects were functioning well at follow-up and were attending school regularly. The favourable short-term outcome may be related to the CAP unit policy of admitting almost all children and adolescents with dissociative disorders, because majority (93.2%) of such cases seen at our (tertiary care) centre are referred cases and do not reside in Bangalore. In addition, most disorders seen at our centre had acute presentations, and the treatment package was comprehensive, and provided rapid removal of symptoms and continuity of care. However, prospective long-term follow up studies may reveal other prognostic factors because information on drop-outs and their functioning was not available in the case files.

The most common dissociative symptom was pseudoseizure followed by (subjects with) a combination of symptoms, fainting, and possession attacks. Pseudoseizures and gait disturbances are the most frequently reported symptoms in children and adolescents.[1,7] The present study adds to the body of literature which suggests that outcome of dissociative disorders in children and adolescents is better when pseudoseizure is the presenting symptom. Studies have shown that this is also one of the reasons for a better prognosis in children when compared to adults,[17] though some studies have shown poorer prognosis for pseudoseizures.[9] Other studies from the east have also shown high rates of pseudoseizures in clinical populations.[1,8,17] Since, seizures are considered to be life threatening, individuals with pseudoseizures are likely brought to clinical attention more frequently than individuals with other symptoms. Greater attention to this symptom may also be responsible for perpetuation due to social learning and modeling. Finally, the high

frequency of pseudoseizures in the present sample could also arise from referral bias, because of close liaison of the CAP unit with the Neurology department at NIMHANS.

Early diagnosis and presence of precipitating factors were associated with a favourable outcome. Correct early diagnosis and appropriate intervention were also reported to predict favourable outcome in previous studies.[8,11] It can be argued that presence of precipitating stress was associated with good outcome because it led to early identification and intervention. Also, most children presenting with dissociative symptoms also had adjustment problems and handling the triggering stress probably helped early resolution of symptoms.

Demographic factors like age, sex, domicile status, family history, co-morbid psychiatric / medical disorders and temperament did not influence the outcome. This is in contrast to other studies where younger age and easy temperament correlated with good outcome.[10] The absence of significant findings could be due to Type 2 statistical error as the sample of patients with follow up data was small.

The findings of the study have to be interpreted keeping some limitations in mind. Firstly, this was only a hospital-based sample and hence the findings are difficult to generalize. Secondly, it had a retrospective chart-review study design with limited structured assessments. Thirdly, there was lack of a control group. Fourthly, there was lack of blind rating. Finally, there was no information about drop-outs. It could be that a high percentage continued to be in remission and did not need regular follow-up. On the contrary it is possible that subjects who had not remitted or had relapsed sought professional help elsewhere. However, there were no significant differences either in the socio-demographic profile or clinical characteristics between the drop-outs and those who were available for follow-up.

In conclusion, children and adolescents with dissociative disorders appear to have a favourable short- and medium-term outcome, despite the presence of psychiatric comorbidity in a majority of the patients. Early diagnosis and presence of a precipitating stressor predicted a good outcome. Further prospective studies to examine efficacy of different treatment modalities, reasons for drop-out, and the course of co-morbid psychiatric disorders need to be planned.

REFERENCES

1. Srinath S, Bharat S, Girimaji S, Seshadri S. Characteristics of a child inpatient population with hysteria in India. J Am Acad Child Adolesc Psychiatry 1993; 32:822-825.
2. Chandrasekaran R, Goswami U, Sivakumar V, Chitralekha J. Hysterical neurosis: a follow-up study. Acta Psychiatr Scand 1994; 89:78-80.
3. Malhi P, Singhi P. Clinical characteristics and outcome of children and adolescents with conversion disorder. Ind Pediatrics 2002; 39: 747-752.
4. Lehmkuhl GB, Lehmkuhl V, Scharm BH. Conversion disorder (DSM-III 300.11): symptomatology and course in childhood and adolescence. Eur Arch Psychiatry Neurol Sci 1989; 238:155-160.
5. Tomasson K, Kent D, Geryell W: Somatization and conversion disorder: comorbidity and demographics at presentation. Acta Psychiatr Scand 1991; 84:288-293.
6. Srinath S, Girimaji SC, Gururaj G, Seshadri S, Subbakrishna DK, Bhola P, Kumar N: Epidemiological study of child & adolescent psychiatric disorders in urban & rural areas of Bangalore. India. Ind J Med Res 2005; 122:67-79.
7. Grattan-Smith P, Fairley M, Procopis P. Clinical features of conversion disorder. Arch Dis Child 198;, 63:408-411.
8. Pehlivanturk B, Unal F. Conversion disorder in children and adolescents: A 4-year follow-up study. J Psychosom Res 2002; 52:187-191.
9. Goodyer IM, Mitchell C. Somatic emotional disorders in childhood and adolescence. J Psychosom Res 1989; 33:681-688.

10. Turgay A. Treatment outcome for children and adolescents with conversion disorder. Can J Psychiatry 1990; 35:585-588.
11. Wyllie E, Friedman D, Rothner AD, Luders H, Dinner D, Morris H, Cruse R, Erenberg G, Kotagal P: Psychogenic seizures in children and adolescents: outcome after diagnosis by ictal video and electroencephalographic recording. Pediatrics 1990; 85:480-484.
12. World Health Organization. The ICD-10 Classification of Mental and Behavioural Disorders: Diagnostic Criteria for Research. Geneva: World Health Organization, 1992.
13. Rutter M. Classification. In Child psychiatry. Edited by Rutter M, Hersov L. Oxford: Blackwell Scientific Publications; 1977:359-384.
14. Shaffer D, Gould SM, Brasic J. A children's global assessment scale (CGAS). Arch Gen Psychiatry 1983; 40: 1228-1231.
15. Isaac M, Chand PK. Dissociative and conversion disorders: defining boundaries. Curr Opin Psychiatry 2006; 19:61-66.
16. Sharma I, Giri D, Dutta A, Mazumder P. Psychosocial factors in children and adolescents with conversion disorder. J Ind Assoc Child Adolesc Mental Health 2005; 1(4):3.
17. Gudmundsson O, Reykjavik D, Prendergast M, Foreman D, Cowley S. Outcome of pseudoseizures in children and adolescents: a 6-year symptom survival analysis. Dev Med Child Neurol 2001; 43:547-551.

Mukesh Prabhuswamy, Senior resident, Child and Adolescent Psychiatry Services, Department of Psychiatry, National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore, India.
Rajeev Jairam, Staff Specialist, Infant, Child and Adolescent Mental Health, South Western Sydney Area Health Service, New South Wales, Australia.
Shoba Srinath, Professor and Head, Child and Adolescent Psychiatry Services, Department of Psychiatry, National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore, India.
Satish Girimaji, Professor, Child and Adolescent Psychiatry Services, Department of Psychiatry, National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore, India.
Shekhar P Seshadri, Professor, Child and Adolescent Psychiatry Services, Department of Psychiatry, National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore, India.