Brief Reports

Clinical Profile of Depressive Disorder in Children

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The aim of this retrospective study was to evaluate the risk factors, clinical features and co-morbid disorders of depressive disorder in children below the age of 12 years. Children who attended the child guidance clinic between January 2000 and December 2003 formed the subjects for the study. The diagnosis of depressive disorder was based on DSMIV diagnostic criteria for Major Depressive Disorder, Single episode. There were 26 boys and 19 girls. Stress at school and in the family was significantly associated with depressive disorder. Children with depressive disorder had significantly more family members affected with mental illnesses. The clinical features included diminished interest in play and activities, excessive tiredness, low self- esteem, problems with concentration, multiple somatic complaints, behavior symptoms like anger and aggression, recent deterioration in school performance and suicidal behavior. Majority of children had other associated psychiatric disorders which included dysthymic disorder, anxiety disorders, conduct disorder and conversion disorder.

Key words: *Co-morbidity, Depressive disorder, Stress .*

EPIDEMIOLOGICAL studies from the west have reported the prevalence of depressive disorders in children in the range of 0.4 to 2.5%(1). In a recent epidemiological study from Bangalore, Sreenath, *et al.*(2) reported that depressive episodes occurred in 0.1% of children in the 4-16 year age group. There is wide variation in the prevalence of depression among children attending the child psychiatry clinics in India and abroad. Three to six per cent children who attended child psychiatry out-patient clinics in Delhi were found to have depression(3,4) while out-patient clinic based studies from outside India reported a much higher prevalence of 35%(5,6).

Even though depressive disorders in children are now recognized as a distinct entity from the adult form, there are very few Indian studies on this subject(7). Depressive disorders in children are often associated with poor psychosocial and academic functioning, increased risk of bipolar disorder, substance abuse and suicide(1). Hence, it is important to identify and treat depressive symptoms in children at the earliest.

The present study was undertaken to evaluate the clinical profile, risk factors and co-morbid disorders associated with depressive disorder in children below the age of 12 years.

Subjects and Methods

This is a retrospective study of children with a clinical diagnosis of depressive disorder who attended the Child Guidance Clinic (CGC) at the Department of Pediatrics, Medical College, Calicut from January 2000 to December 2003. At the time of out patient consultation the details regarding age, sex, clinical history, family history, personal history, developmental history, history of play and school functioning, mental status examination and physical examination were recorded in the case sheet. Relevant investigations and specialty consultations were done to rule out organic causes. Seguin form board test was used to identify children with mental retardation(8). Children who satisfied the inclusion criteria were taken up for the final analysis. The inclusion criteria were the following: (*a*) The DSMIV diagnostic criteria for Major Depressive Disorder, Single episode(9) should be satisfied and (*b*) Children should be having first episode of depressive disorder. Children with mental retardation and other neurological disorders and those suffering from significant medical illnesses were excluded. Children above the age of 12 years who attended the CGC were also not included in the study.

Children with depressive disorder were compared with an age and sex matched control group of children with regard to stress factors for depressive disorders. The control group consisted of children who attended the general pediatric OP for minor illnesses like upper respiratory infection. Children in the control group were between 6-12 years, without any features of depressive disorder, neurological disorders, mental retardation and significant medical illnesses.

Chi square test and Fisher exact test were applied to detect the significant stress factors. P-value less than 0.05 was considered as statistically significant.

Results

There were 45 children with depressive disorder, who satisfied the inclusion criteria, during the study period. There were 26 (58%) boys and 19 (42%) girls. 26 (58%) children were in the 11-12 year age group, 15 (33%) in the 8-10 year age group and 4 (9%) children below 8 years. The youngest was a 6- year old girl who had lost her father during infancy and who was staying away from her mother in an orphanage. The control group consisted of 52 boys and 38 girls in the 6-12 year age group.

Stress, either at school or in the family was present in 73%(33) of children with depressive disorder. Eighteen per cent(8) of them had stress at both school and within the family. When children with depressive disorder were compared with those in the control group, both stress in the school and in the family were found to be statistically significant. Stress factors in the family that were found to be significant included parental alcoholism, death of a parent, parental disharmony and staying away from parents. Learning problems and examination failures were significantly more in children with depressive disorder. (*Table I*).

Children with depressive disorder had significantly more family members affected with mental illnesses, compared to the children in the control group. (*Table I*). History of mental illness in close relatives was present in 16 (36%) depressed children. Parents or siblings had history of mental illness in 13 (29%) children and of these 9 (20%) were having mood disorders.

The depressive symptoms were mild in 8 (18%) cases and moderate in 25 (56%) cases. Severe depressive episode occurred in

TABLE I– *Comparison of Stresses in Children with Depressive Disorder*

Parameter	Case (n = 45)	Control (n = 90)	Odds ratio	95% confidence interval		p
Parental alcoholism	5	2	5.50	1.02	29.50	0.04
Death of a parent	9	2	11.00	2.26	53.43	0.0008
Family h/o mental illness	16	8	5.65	2.19	14.60	0.0001
Parental disharmony	11	4	9.10	2.67	30.98	0.0002
Staying away from parents	7	1	16.39	1.95	137.89	0.002
Examination failure	7	3	5.34	1.31	21.77	0.02
Learning problems	12	3	10.55	2.80	39.80	0.0001
Over all stress in the family	23	7	12.40	4.71	32.63	0.000
Over all stress in the school	14	9	4.06	1.56	10.34	0.002

12 (26%) children. The average duration of illness, excluding cases with dysthymic disorder, before presentation was 3.8 months.

The common symptoms at the time of presentation included diminished interest in play and activities (39; 87%), problems with concentration (37; 82%), excessive tiredness (30; 67%), behavior symptoms like anger and aggression (29; 64), multiple somatic complaints like head ache, abdominal pain and chest pain (24; 53%), recent deterioration in school performance (16; 36%), decreased sleep (17; 38%), decreased appetite (25; 56%) and low self-esteem and guilt feelings (12; 27%). One girl had increased appetite, weight gain and excessive sleep. Depressed mood was present in 86% (39) children and 14% (7) had irritable mood. 12 (27%) children exhibited suicidal thoughts and among them 7 (16%) children actually attempted suicide. Psychotic features were present in 3 (7%) children. Among the three, one child had mood congruent auditory hallucinations alone and two had auditory hallucinations and persecutory delusions. One child said he was frequently hearing voices scolding him and asking him to bend his head as if apologizing to somebody. He also believed that people were hiding under the bed, table etc to catch and punish him.

Co-morbid psychiatric disorders were present in 23 (51%) children. These included dysthymic disorder (9; 20%), anxiety disorders including generalized anxiety disorder and separation anxiety disorder (8; 18%), conduct disorder (4; 9%) and conversion disorder (4; 9%). Obsessive-compulsive disorder was present in 3 (7%) children.

Discussion

In adolescents and adults depressive disorders are more common in females with a male/female ratio of 1:2. This gender difference is reported to begin after the age of 14 years(10) and in children, major depressive disorder occurs at the same rate in boys and girls(1). In the present sample boys outnumbered girls, even though the difference was not statistically significant. One reason for the male preponderance may be that parental expectations and subsequent stress in academic and other fields in boys is much more than that in girls in Indian families. Ryan, *et al.*(11) also reported more boys in their

sample of children with major depressive disorder.

Several studies using both clinical and community samples of depressed children have reported the association between depression and stressful life events(1,6,12). The finding of the present study that stress, either at school or in the family was present in 73% children is comparable to that of Chandra, *et al.*(13) who reported that two-thirds of school aged children with mental disorders attending a general pediatric department in southern India had multiple stresses.

The stress factors in the family that were found to be significant in the present sample (parental alcoholism, death of a parent, parental disharmony) were also reported in other studies(1,14,15). Abnormal family interactions between mother and child during the early years may cause children to develop patterns of dealing with stress that predispose them to depression(1).

High incidence of mental illness, especially mood disorders in the parents and siblings of depressed children in our sample point to a genetic basis for childhood depression. Other studies in the past have reported similar findings(14,16,17). It was suggested that, vulnerability to develop depression is inherited and exposure to environmental stress leads to clinical manifestations(1).

Staying away from parents was found to be a significant risk factor for depression in children. In Kerala, due to socio economic reasons, there are several children who stay in hostels or orphanages or have parents working abroad. These children form a vulnerable group who need more attention.

The relationship between scholastic problems and psychological and emotional disorders in children is well documented(2, 13). High parental expectations and parental behaviors contribute to school-related stress. In a class of 40 or more students, the teacher can not give individual attention to children with learning disorders and children who are slow learners. The finding that learning problems and examination failures contribute to depressive disorder in children, emphasizes the need to address the problems of this group of children while planning academic curriculum. Strategies to improve the quality of teaching and learning in our schools should be developed.

The clinical features of depression in children in the present sample were comparable to those reported in other studies(1,11). Children with depression were found to have more somatic complaints, phobia, anxiety symptoms and behavior problems. Features of endogenicity or melancholia, suicidality and lethality of suicidal attempts were found to increase with age(1,7). Studies have reported that children and adolescents with clinical depression frequently experience impairments in school performance and relationships with others during the episode(18). In the present sample 36% of children had recent deterioration in academic performance. Although this can occur in other situations, it is prudent to look for features of depressive disorder in children with recent deterioration of academic performance. The psychosocial impairments can be a precursor or the result of psychological or emotional disorders(1).

Depression is the most common psychiatric disorder associated with suicidal behavior in children and adolescents(19, 20). In the present sample, 26% of children had suicidal thoughts and 16% of them actually attempted suicide. It has been noted that the suicidal act in children is most often impulsive and not preplanned. This is true even when

Key Messages

- Stress in the family and school is significantly associated with depressive disorder in children.
- Children with recent deterioration in school performance, multiple somatic complaints and behavior symptoms like irritability, anger and aggression should be evaluated for depressive disorder.
- Suicidal ideation and suicidal attempt may be a manifestation of depressive disorder in children.

psychiatric disorders are present(19).

The small sample size and the inherent limitations of a retrospective hospital based study should be considered while interpreting the result of present study.

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Contributors: PK was the medical officer in charge of the child guidance clinic who did the psychiatric evaluation of the children. He designed the study, collected and analyzed the data and wrote the initial draft of the paper. He will act as the guarantor for the paper. MGG helped in designing the study and analysis of the data. She wrote the final draft of the paper.

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