



PSYCHOPATHOLOGY IN MOTHERS OF CHILDREN WITH GLOBAL DEVELOPMENTAL DELAY DUE TO SPASTIC DIPLEGIA

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¹Soundarya Mahalingam, ²Nutan Kamath, ³Basavaprabhu Achappa, ⁴Deepak Madi. ¹ Associate Professor, Department of Paediatrics, ² Professor, Department of Paediatrics, ^{3,4} Associate Professor, Department of Internal Medicine, Kasturba Medical College, Mangalore (Affiliated to Manipal University)

ABSTRACT

CORRESPONDENCE :

Dr. Basavaprabhu Achappa
Associate Professor,
Department of Internal
Medicine,
Kasturba Medical College,
Mangalore (Affiliated to
Manipal University)
Email.id:
bachu1504@gmail.com
Mobile No: +919980170480

“Chronic illness like global developmental delay affects the psychological health of mother. Psychological therapy is required to improve the quality of life of mothers.”

Background and Objectives:

Parents of children with chronic illness like global developmental delay exhibit varied psychopathology in response to their child’s illness. Mothers of these children are more susceptible when compared to fathers, and hence show various psychopathological changes. Analysis of their psychological status is important to identify those families which need psychological help and counseling. The main aim of our study was to evaluate psychopathology in mothers of children with global developmental delay due to spastic diplegia. We also assessed the impact of intervention of the child on the psychological state of the mother over a 12 month follow up.

Materials and methods:

60 mothers of children with global developmental delay due to spastic diplegia were selected from Neurodevelopmental Clinic of a tertiary care institution. Symptom Checklist 90 Revised (SCL90R) was used to assess psychopathology. A repeat evaluation of mothers was done after 12 months of conventional intervention (Bobath technique) for their child. Data was analyzed using appropriate statistical measures.

Results:

On assessing the psychiatric morbidity by SCL 90R, significant psychopathology was found in 54(90%) out of 60 mothers. Depression was the predominant psychopathology in the study population. Anxiety was also significantly elevated. The GSI (General Symptomatic Index), a measure of general distress was extremely high in 90% of the mothers. On follow up analysis of mothers using SCL 90R, 33% of the mothers showed no improvement in their psychological status following conventional intervention for their child.

Conclusions:

Chronic illness like global developmental delay affects the psychological health of mothers. In addition to purely focusing on the medical management of the child it is essential to focus attention on the distress experienced by their parents. Psychological therapy is hence required to improve the quality of life of mothers.

Key Words: Psychopathology; Symptom Checklist 90 R (SCL 90R); Spastic Diplegia.

INTRODUCTION

Today, an increasing number of children are being diagnosed to have global developmental delay. Their treatment regimens are prolonged and require family support. An important yet unfocussed area while dealing with children with chronic problems like global developmental delay is the psychological morbidity of the parents of the child. Being fully aware of the condition and prognosis of their child, there is a tremendous amount of psychological stress on these parents. Copeland et al¹ have focused on the burden various chronic illness have on family. Parents with children who have long term illnesses are under greater strain than other families².

The task of caring for a child with complex disabilities at home is daunting for the caregivers. One of the main challenges for the parents is to manage their child's health problems effectively and juggle this role with the requirements of everyday living. The provision of such care may prove detrimental to both the physical health and psychological wellbeing of parents of such children³.

Mothers of these children are more susceptible to these emotions when compared to fathers, and hence show various psychopathological changes. There is very sparse literature on the psychological aspects of parents of such children in India.

The main aim of our study was to analyze the psychological morbidity in mothers of children suffering from global developmental delay due to spastic diplegia. We also assessed the impact of early intervention of the child on the psychological state of the mother over a 12 month follow up.

MATERIALS AND METHODS

Approval from institutional ethics committee was obtained to conduct the study. The study was conducted in the Neurodevelopmental Clinic of a tertiary care institution. During the study period children attending the clinic who were newly diagnosed with global developmental delay due to spastic diplegia were chosen. The diagnosis of spastic diplegia was made using significant history of delayed development along with clinical examination and Developmental Milestone Scales. The mothers of these children who had accompanied their child to the above mentioned clinic were invited to participate in the study. 60

mothers agreed to participate in the study. Parents of children who were diagnosed to have global developmental delay for more than a year were excluded from the study. Parents with a history of known physical or psychiatric illness having its onset prior to the diagnosis were also excluded. Each parent included in the study was interviewed for a period of 1 hour after obtaining an informed consent.

The Symptom Checklist 90R (SCL90R)⁴ was used to assess the psychiatric morbidity in our study population. The questionnaire consists of 90 items dealing with an individual's symptom distress in the previous seven days. Subjects have to assign a score from 0 to 4 depending on the degree of suffering related to the item: consequently, each item is rated on a five-point Likert scale (0-4) from "not at all" to "extremely" distressing. In clinical practice, the SCL-90-R is used to reflect a general symptom level of the individual, i.e. the global severity index (GSI), as well as a more differentiated subscale.

The nine subscales that can be derived from the SCL-90-R are: somatization (12 items), obsessive compulsive (10 items), interpersonal sensitivity (9 items), depression (13 items), anxiety (10 items), anger-hostility (6 items), phobic anxiety (7 items), paranoid ideation (6 items) and psychoticism (10 items). The final score of the global severity index (GSI) GSI, which represents the average severity score of all the 90 items of the questionnaire, is thought to be a reliable measure of psychological distress.⁵ Higher scores represent more problems. Scores less 0.59 was considered normal.

The same mothers were again reassessed after a period of 1 year during which their child underwent neurodevelopmental intervention on a bimonthly basis (Bobath Technique) and gradually gained milestones. No psychiatric / psychological intervention was given to the mothers after the first assessment.

Data Analysis:

The data obtained after manual scoring of the scale was pooled and the percentages of the score and the average score were computed for the various groups. Correlations were studied and analyzed using statistical measures as provided with the scale.

RESULTS

On assessing the Psychiatric Morbidity by SCL 90R, significant psychopathology was found in 54(90%) out of 60 mothers.

Among the 60 mothers analyzed, the most common psychopathology was Depression, seen in 48 mothers (80%), followed by Anxiety in 63%. Other psychopathology that were encountered while interviewing the mothers were Somatisation (20%), Paranoid Ideation (13%) and Obsession-Compulsion (3.3) (Table 1).

On analysing the symptom as a psychological parameter wherein T score of >0.4 was considered significant, Depression showed the highest T score of 1.87, followed by anxiety with a T score of 1.5. (Table 1)

In our study only 6 (10%) mothers did not show any significant psychopathology. 54 mothers had a GSI of greater than 0.57, indicating significant psychopathology and mental distress in 90% of the study sample (Table 2)

After 1 year of neurodevelopmental intervention for the child to help attain developmental milestones, the same mothers were interviewed again. The follow up data showed that 18 (33.3%) mothers did not show any improvement of their psychological condition despite intervention and improvement in their child (Table 3).

DISCUSSION

To our knowledge, this is the first study in our country that examines the impact of childhood limitations (global developmental delay due to spastic diplegia) on parental mental health using SCL-90-R. We also assessed whether therapy for the child alone reduces psychopathology of parents. Significant psychopathology was found in 54(90%) out of 60 mothers during baseline evaluation in our study. Depression was the commonest psychopathology seen in our study.

Cerebral palsy (CP) is a developmental disorder that begins in childhood as a set of functional limitations that stem from disorders of the developing central nervous system⁶. Spastic diplegia is a type of cerebral palsy. Although impaired motor function is the hallmark of the CP syndromes, many children also experience

communicative and intellectual impairments and may have limitations in self-care functions such as feeding, dressing, and mobility.³

There is no literature available on psychopathology of parents with children of spastic diplegia. Similar findings were reported in a study in a paediatric oncology centre.⁷ Depression was the commonest psychopathology in a study done by Rao et al.⁸ where the parents of children with thalassemia were taken as the study group. This is consistent with findings from literature (50% by Gayton et al.⁹ and 79% by McCrae et al.¹⁰

Global severity index (GSI), a composite measure of assessing psychiatric morbidity was calculated for each subject in our study. GSI of >0.57 indicates significant general distress,¹¹ which is what was adopted in the present study and significant distress was found in 90% of the sample, using this value. Rao et al.⁸ have shown similar results⁶ mothers did not have psychopathology on the scale which was explained as their children were of a milder variant of spastic diplegia and the children were near achieving their normal developmental milestones.

The diagnosis of a chronic illness results in an overwhelming number of emotions in the family, notably shock, confusion, denial, anger, guilt, anxiety, self blame, fear, helplessness and depression.¹² With the birth of a disabled child, parents experience complex feelings that include the feeling of losing someone beloved.¹³

Canadian studies have used other scales and assessed the physical as well as psychiatric morbidity of caregivers of spastic children and found increased morbidity on both grounds in caregivers of spastic children.¹⁴ The diagnosis of global developmental delay in the child spells for the parents, psychological trauma of their child being markedly abnormal as compared to other children. Witt et al have demonstrated that caring for a child with health problem profoundly affects the physical health and mental health of parents.¹⁵

On follow up of these mothers, using the same scale, after 12 months of conventional intervention for their

Table1. Comparison of Psychopathology in mothers-pre and post intervention for their child

Psychopathology	At diagnosis (n) [*]	Distress Index (T score)	Post intervention (n)after 12 months
Depression	48	1.87	14
Anxiety	38	1.5	12
Somatisation	12	1.38	5
Paranoid ideation	8	0.4	4
Hostility	2	0.03	1
Obsession Compulsion	2	0.03	0
Others(inter-personal sensitivity, phobic anxiety, psychotism)	0	0	0

*Note: n>60 as some mothers had had more than one psychopathology in some cases

Table2. Global severity index (GSI) In the Study Subjects

GSI Score	Number of Mothers(n)	Percentage(%)
< 0.57	6	10%
> 0.57	54	90%

Table 3 Follow Up Data after 12 Months

Follow up	No of Mothers(n)	Percentage (%)
Improvement	36	66.66
No improvement	18	33.33

* 6 mothers who scored normal on the primary evaluation were excluded from the follow up study.

child, 33% of the mothers did not show significant improvement. Depression was the commonest finding. Pediatricians who come in contact with these parents must identify psychopathology then refer them for counseling so that the children grow in a stress free family atmosphere.

Cross sectional design has its own limitations. Our study population was predominantly urban and hence it cannot be considered representative of the rural population of caregivers.

CONCLUSION

There is a significantly high occurrence of depression in mothers whose child suffers from global developmental delay due to spastic diplegia. Based on the SCL 90R 80%

of the mothers were found to have elevated scores on the Depression dimension. Despite improvement in the child following intervention, a significant number of mothers failed to show any improvement in their psychological status.

Purely focusing on the medical management of these children is not enough. It is essential to focus attention on the distress experienced by their parents. Appropriate psychiatric intervention will reduce the mental stress in these parents.

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