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CLINICAL BRIEF

Outcome of Conversion Symptoms in Children

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Abstract

The study evaluated the short-term outcome of children diagnosed with conversion disorder and compared their pre- and post-intervention psychological functioning. Fifty children consecutively diagnosed with conversion disorder over a period of one year were recruited from the pediatrics department of a tertiary care teaching hospital in North India. The adverse life events were assessed by the Life Events Scale for Indian Children, emotional and behavioral difficulties by the Childhood Psychopathology Measurement Schedule (CPMS), and adjustment by the Pre-Adolescent Adjustment Scale (PAAS). Majority of the children improved at follow up at 3 mo after initiation of treatment. In addition, total scores on the CPMS significantly declined ($t = 5.12$, $P = 0.0001$) and self-reported adjustment improved on the PAAS ($t = 5.81$, $P = 0.0001$) as compared to functioning before the initiation of therapy. Timely recognition and multi-disciplinary management can lead to successful outcome and improved functioning in most children diagnosed with conversion disorder.

Keywords Conversion disorder · Psychosocial functioning · Outcome

Introduction

Conversion disorder has a variable presentation including paralysis, functional tremors, psychogenic non-epileptic seizures (PNES), ataxia, dystonia, imbalance, walking difficulties, loss of vision, and motor weakness and is a common problem with which children present to tertiary care centres in India [1, 2]. Emotional distress secondary to adverse childhood experiences play a critical role in the evolution of symptoms and a careful history regarding the same needs to be elicited while evaluating children in whom conversion disorder is suspected [3]. The objectives of the study were to evaluate the short-term outcome (three months) and to compare pre- and post- therapy psychosocial functioning of children diagnosed with conversion disorder.

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Material and Methods

Fifty children (M = 10.2 y, SD = 1.7; age range 6–12 y) diagnosed with conversion disorder (DSM 5 criteria), over a period of one year, were consecutively recruited from the department of pediatrics of a tertiary care hospital. Comprehensive neurological and psychosocial assessment was undertaken by a team of pediatric neurologist and a child psychologist. Children with any other neurological disorder or chronic medical condition were excluded. The diagnosis of conversion disorder was jointly made by the team and the life events were assessed by the Life Events Scale for Indian Children (LESIC) [4], Childhood Psychopathology Measurement Schedule (CPMS) [5] and Pre-Adolescent Adjustment Scale (PAAS) [6]. Outcome was measured 3 mo (± 15 d) after diagnosis and favourable outcome was defined as more than 50% reduction in symptoms. In addition, the CPMS and the PAAS were re-administered after 3 mo and paired comparison t test was used to compare scores before and after intervention to assess for improvement in psychosocial functioning over time. The study was approved by the ethical committee of the institute.

Results

Majority of the cases (60%) were boys and the M:F ratio was 3:2. More than half (58%) of the children presented with

PNES, followed by hyperventilation (18%) and sensory disturbances (16%). Video EEG was done in 21 of the 28 cases of PNES to confirm the diagnosis. Precipitating psychosocial events were reported by 88% of the families and among these 84% reported multiple stressors. Psychosocial stress was found to be primarily related to family and school difficulties. Significantly (t = 8.37, $P = 0.0001$) greater number of life events in the last one year (M = 3.90, SD = 2.58) as compared to the previous year (M = 0.62, SD = 1.23) were reported by the families of children with conversion disorder on the LESIC. The stress score associated with the life events experienced in the last one year was also significantly higher than the prior year (t = 10.78, $P = 0.0001$). The mean CPMS score was 6.02 (SD = 5.38) which was higher than the population mean score of 4.49. In addition, 20% of the cases had CPMS scores above the cut off score indicating that these children were experiencing significant emotional and behavioral problems. Majority (84%) experienced significant reduction in the frequency of the symptoms and 16% of the parents reported some improvement and none reported worsening of their symptoms. Subsequent to the therapeutic intervention, emotional and behavioral problems as assessed on the CPMS significantly (t = 5.12, $P = 0.0001$) declined over the three months of treatment and the self-reported adjustment scores significantly improved as assessed on the PAAS (t = 5.81, $P = 0.0001$) (Table 1).

Discussion

The clinical management focussed on unambiguously communicating the diagnosis, psychoeducation, shifting the focus of families from physical to a psychological explanation, reinforcing healthy behaviors, problem solving, rehabilitation and return to normal functioning [2, 7]. Favourable outcome, as measured by reduction or complete resolution of symptoms, was found for majority of the cases. In addition, improvement in psychological functioning of the child was also documented after three months of therapy. Children who showed reduction in their symptoms, resumed their routine functioning, including full-time return to school and no symptom substitution or relapse was noted. Only few studies have examined long term outcome in children with conversion disorder with variable results. Few have noted favourable long-term outcome [8] while one study noted unfavourable long-term outcome [9]. The favourable prognosis in children with conversion symptoms is in contrast to the relatively unfavourable outcome noted in adult patients [10]. Some of the factors identified for a favourable outcome include younger age at presentation, being female, early diagnosis, shorter duration of symptoms, targeted interventions delivered by a multidisciplinary team, and family acceptance of the diagnosis [1, 2, 7].

The present study highlights the importance of collaborating with other health professionals, in the diagnosis and successful management of children with functional neurological

Table 1 Comparison of pre- and post-intervention scores on the CPMS and PAAS

	Pre-intervention Mean (SD)	Post-intervention Mean (SD)	t	P
CPMS subscale and total scores				
Low intelligence with behavior problems	1.7 (2.2)	0.5 (0.1)	4.56	0.0001
Conduct disorder	2.0 (2.2)	1.4 (1.9)	3.82	0.0001
Anxiety	0.5 (1.0)	0.2 (0.5)	1.85	0.070
Depression	0.8 (1.2)	0.4 (0.9)	2.67	0.010
Psychotic symptoms	0.4 (0.8)	0.1 (0.4)	3.23	0.002
Special symptoms	0.1 (0.4)	0.1 (0.2)	1.14	0.261
Physical illness with emotional problems	0.1 (0.3)	0.1 (0.3)	1.00	0.322
Somatization	0.4 (0.7)	0.2 (0.6)	2.14	0.038
Total	6.0 (5.4)	3.0 (3.6)	5.12	0.0001
PAAS subscale and total scores				
Home	6.6 (3.1)	6.5 (2.5)	0.93	0.365
School	3.2 (2.0)	5.1 (2.0)	6.19	0.0001
Peers	4.3 (2.7)	5.3 (1.3)	3.03	0.0001
Teacher	3.5 (2.8)	5.1 (2.1)	5.23	0.0001
General	4.4 (1.9)	5.5 (1.2)	4.42	0.0001
Total	22.1 (8.4)	27.2 (6.8)	5.81	0.0001

CPMS Childhood Psychopathology Measurement Schedule; *PAAS* Pre-Adolescent Adjustment Scale

symptoms. Delayed or a missed diagnosis negatively impacts children and their families and also burdens the health care system. Timely recognition of the disorder may prevent unnecessary diagnostic investigations and entrenchment of symptoms. Early referral to mental health services for management and a multi-disciplinary team approach can lead to a favourable outcome and also improve child's overall psychosocial functioning.

Authors' Contributions PM designed the study, analyzed the data, and wrote the manuscript. PM, PS, and NS together made the diagnosis and helped in designing the study. CK collected the data and helped in analyzing the data and writing of the manuscript. All the authors approved the manuscript. PM will act as guarantor for the paper.

Compliance with Ethical Standards

Conflict of Interest None.

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;32:822–5.
2. Malhi P, Singhi P. Clinical characteristics and outcome of children and adolescents with conversion disorder. Indian Pediatr. 2002;39:747–52.
3. Kozlowska K, Chudleigh C, Cruz C, et al. Psychogenic non-epileptic seizures in children and adolescents. Part I: diagnostic formulations. Clin Child Psychol Psychiatry. 2018;23:140–59.
4. Malhotra S, Kaur R, Nehra R. Life events in psychiatrically sick children. Indian J Psychiatry. 1992;34:222–30.
5. Malhotra S, Verma VK, Verma SK, Malhtora A. A childhood psychopathology measurement schedule: development and standardization. Indian J Psychiatry. 1988;30:325–32.
6. Pareek U, Rao TV, Ramalingaswamy P, Sharma BR. The Battery of Preadolescent Personality Tests. Varanasi: Rupa Psychological Centre; 1976.
7. Chinta SS, Malhi P, Singhi P, Prabhakar S. Clinical and psychosocial characteristics of children with nonepileptic seizures. Ann Indian Acad Neurol. 2008;11:159–63.
8. Ani C, Reading R, Lynn R, Forlee S, Garralda E. Incidence and 12-month outcome of non-transient childhood conversion disorder in the UK and Ireland. Br J Psychiatry. 2013;202:413–8.
9. Jans T, Schneck-Seif S, Weigand T, et al. Long-term outcome and prognosis of dissociative disorder with onset in childhood or adolescence. Child Adolesc Psychiatry Ment Health. 2008;2:19.
10. Irwin K, Edwards M, Robinson R. Psychogenic non-epileptic seizures: management and prognosis. Arch Dis Child. 2000;82:474–8.