

Clinical Profile of Pediatric Somatoform Disorders

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ABSTRACT

Objectives: To study the prevalence, pattern, clinical and socio-demographic characteristics of somatoform disorders in children. **Methods:** From Aug 2004 to July 2005, children up to 18 years with unexplained physical symptoms were evaluated prospectively using DSM-IV criteria. Detailed evaluation followed for those meeting criteria. **Results:** The prevalence of Somatoform disorders was 0.59% and 0.78% among out-door and in-door patients respectively. Among 124 children (40 boys and 84 girls) meeting criteria, conversion disorder was the commonest (57.3%), followed by undifferentiated somatoform disorder (25.2%). Girls were significantly more represented among conversion disorder patients compared to other groups of somatoform disorders (78.9 vs. 52.8 %, $P=0.002$). In conversion disorder, 2/3rd patients presented within 3 months, whereas in other somatoform disorders, 2/3rd patients presented within 3 months after symptoms. Fainting attacks (52.1%) and ataxia (43.7%) in conversion disorder and pain abdomen (52.8%) and headache (52.8%) in other somatoform disorders, were the commonest symptoms. Stressors were identified in 73.4 % and acute precipitating stressors were present in 14.4% children. Boys had significantly higher rates of poor inter-personal relations and communication problems within the family (72.5 % vs. 41.7%, $P=0.001$), while girls had significantly higher rates of conflicts with the parents and other family members (21.4 % vs. 5 %, $P=0.02$). **Conclusion:** Somatoform disorders, particularly conversion disorder is commoner in girls. Important stressors are poor inter-personal relations and communication problems within the family in boys, and conflicts with family members among girls.

Key words: Conversion, Pain disorder, Somatization, Somatoform disorder, Stressors.

INTRODUCTION

Somatoform disorders are characterized by physical symptoms that suggest a medical condition, and which are not fully explainable by a general medical condition, by the direct effects of a substance, or by another mental disorder(1). In contrast to factitious disorders and malingering, the physical symptoms are not intentional(1). The direct and indirect resource consumption by these patients can be enormous(2). Both under and over treatment are common. Physicians may have feelings of annoyance or of being manipulated when confronted with such patients.

Estimates of prevalence of somatoform disorders have varied with type of population studied and methods employed(3). In a recent prospective study

(4), 52% of patients had conversion disorder, 13.3% undifferentiated somatoform disorder, 4% somatoform 'not otherwise specified', 2% somatization disorder, 8.6% pain disorder and the rest had other psychiatric illnesses. Diagnostic criteria of these disorders are typically met before 25 years of age, but initial symptoms are often present by adolescence. The developmental differences between adults and children lead to different presentations; hence, the adult literature is of limited usefulness in the assessment and management of a pediatric population. Studies in childhood population are sparse(5) and those evaluating somatoform disorders as a group are even lesser. This study was undertaken with an aim to determine socio-demographic profile and associated stressors in somatoform disorders in pediatric population.

METHODS

Prospectively from August 2004 to July 2005, all inpatients and outpatients children up to age of 18 years with unexplained physical symptoms were evaluated. On the suspicion of somatoform disorder, a psychiatrist did a complete psychiatric evaluation in the form of exploration for stressors in the child's domestic or school environment. The final diagnosis was assigned thereon, based on DSM-IV criteria(1). Those patients with explainable organic causes for the symptoms were excluded from the evaluation.

A detailed history including, symptoms, medical, psychiatric history, socio-demographic background, birth, developmental history, personal and family history details was recorded from the parents, patient and accompanying informants. Complete physical examination and relevant investigations were done as indicated. The socio-economic status of the family was determined as per modified Prasad's score for social classification(6). The data of all the enrolled patients was collected on a semi structured proforma by a single observer.

Continuous variables were compared by student *t*-test. Other variables were described as frequency and proportion and were compared by Chi-Square test. Significance was assigned at 5% level.

RESULTS

During the study period somatoform disorders were diagnosed in 124 patients, giving a prevalence of 0.59% (103 among 17500) and 0.78% (21 among 2678) among out-door and in-door pediatric patients respectively. Conversion disorder was diagnosed in 71 (57.3%) patients and the rest were categorized into other somatoform disorders, which included—undifferentiated somatoform disorder (31 cases, 25.2%), somatoform disorder not otherwise specified (18 cases, 14.5%), somatization disorder (2 cases, 1.6%) and pain disorder (2 cases, 1.6%). None met the criteria for hypochondriasis or body dysmorphic disorder.

Eighty seven (70.1%) children were aged 12 years or more. The mean age of the study group was 13.2 ± 2.8 yrs (range 8-18). The female to male ratio was 2.1:1. Girls were significantly more represented

among conversion disorder patients compared to other groups of somatoform disorders (78.9 vs 52.8%, $P=0.002$). Majority of the children were from rural areas (71%), belonged to a nuclear family(64.5%), had a birth order ≤ 2 (82.2%) and were social class I (72.6%). However, no significant differences were observed on comparing boys and girls, or between conversion disorders and other somatoform disorders. In conversion disorder more than two third of patients (67.7%) presented within 3 months and 52.2% reported within 1 month of symptoms. Among other somatoform disorders, more than 2/3rd of patients (67.9%) presented three months or later after symptoms, whereas 22.6% presented within 1 month. Fainting attacks and ataxia in conversion disorder and pain abdomen and headache among other somatoform disorders, were the commonest symptoms (**Tables I, II**). 'La belle indifference' was observed in 46.7 % patients.

TABLE I SYMPTOMS IN CONVERSION DISORDERS

Symptoms	Boys (15) n (%)	Girls (56) n (%)	Total (71) n (%)
Fainting attack	8 (53.3)	29 (51.8)	37 (52.1)
Ataxia	7 (46.7)	24 (42.9)	31(43.7)
Headache	5 (33.3)	17 (30.4)	22 (31)
Pain abdomen	6 (40)	13 (23.2)	19 (26.8)
Hyperventilation	4 (26.7)	15(26.8)	19 (26.8)
Pain chest	3 (20)	14 (25)	17 (24.0)
Pseudoseizure	2 (13.3)	13 (23.2)	15 (21.1)
Amnesia	2 (13.3)	6 (10.7)	8 (11.3)
Dysphagia	1 (6.7)	6 (10.7)	7 (9.9)
Aphonia	2 (13.3)	5 (8.9)	7 (9.9)
General Pain	2 (13.3)	5 (8.9)	7 (9.9)
Vomiting	1 (6.7)	5 (8.9)	6 (8.5)
Lump in throat	1 (6.7)	4 (7.1)	5 (7.0)
Hallucination	1 (6.7)	2 (3.6)	3 (4.2)
Teeth clenching	2 (13.3)	1 (1.8)	3 (4.2)
Paralysis	1 (6.7)	1 (1.8)	2 (2.8)
Dystonia	–	2 (3.6)	2 (2.8)
Blindness	–	1 (1.8)	1 (1.4)
Feeling of suffocation	–	1 (1.8)	1 (1.4)

Differences were statistically insignificant ($P>0.05$)

TABLE II SYMPTOMS IN OTHER SOMATOFORM DISORDERS

Symptoms	Boys (n=25) n (%)	Girls (n=28) n (%)	Total (n=53) n (%)
Pain abdomen	13 (52.0)	15 (53.5)	28 (52.8)
Headache	14 (56.0)	14 (50.0)	28 (52.8)
Pain chest	11 (44.0)	7 (25.0)	18 (33)
Vomiting	7 (28.0)	5 (17.8)	12 (22.6)
Food intolerance	3 (12.0)	1 (3.5)	4 (7.6)
Urinary urgency	2 (8.0)	2 (7.0)	4 (7.6)
Low backache	3 (12.0)	1 (3.5)	4 (7.6)
Generalized bodyache	1 (4.0)	2 (7.0)	3 (5.6)
Dysmenorrhea	–	2 (7.0)	2 (3.8)
Bloating	2 (8.0)	–	2 (3.8)
Muscle twitching	–	1 (3.5)	1 (1.9)
Numbness of body part	–	1 (3.5)	1 (1.9)
Painful defecation	–	1 (3.5)	1 (1.9)

Differences between boys and girls were statistically insignificant ($P>0.05$)

Among 91 (73.4%) children with identifiable stressors, acute precipitating stressors were present in 18 (14.5%) patients. The rate was nearly double in those with conversion disorder compared to other somatoform disorders (18.3% vs 9.4%, $P=0.26$). The stress of school examination and recent school change/joining of hostel were the most common recent stressors present in 4.8% and 3.2% children respectively.

Among chronic stressors, boys had significantly higher rates of poor inter-personal relations and communication problems within the family (72.5% vs 41.7%, $P=0.001$), while girls had significantly higher rates of conflicts with the parents and other family members (21.4% vs 5%, $P=0.02$). Sibling rivalry was observed in 23.4% children. During the course of illness, irregularity in school attendance was observed in 53.2% patients. Other school related problems were school failure (27.4%), subject learning difficulty (25%) and school refusal (24.2%).

DISCUSSION

We found many differences in profile of conversion disorders and other types of somatoform disorders,

but the study of somatoform disorders as a group is useful. The advantage is based on the clinical utility (*e.g.*, need to exclude medical conditions/substance abuse) rather than on assumption regarding shared etiology or mechanisms(1). Despite the fact that conversion disorder has been reported in children as young as 1- 5 years(7), in the present study, the minimum age of presentation was 8 years which is in keeping with the view that age of inception of conversion disorder is unlikely to be before five years of age(3,8). Excess of female patients compared to males in conversion disorder is a feature of adult patients, but it has also been seen in many pediatric studies(5,8-10). However, others have observed no such differences or a reverse trend(7,11). In the present study, girls were two times more likely to present with a somatoform disorder. This difference of sex representation was significantly more apparent among conversion disorders. In this region, more attention and concern is shown to boys as compared to girls. The girl child grows in an atmosphere of inhibited emotional ventilation. This coupled with the pressures of puberty possibly account for the higher occurrence of conversion disorders among girls(12).

WHAT IS ALREADY KNOWN?

- Somatoform disorders are described in children and adolescents.

WHAT THIS STUDY ADDS?

- Poor inter-personal relations, communication problems and family conflicts predispose to somatoform disorders in children.

The type and frequency of somatic symptoms may differ across cultures. In studies with smaller samples, pseudoseizures have been found to be the most common symptom of conversion disorders(4,11). However, we and certain previous reports(5,8) found fainting attacks and ataxia commoner. Virtually any system might be targeted for psychosomatic symptomatology. In a study of children with hysteria (includes conversion and dissociation disorders) and psychalgia(18), those with psychalgia commonly had headache (50%) and abdominal pain (45.4%), while those with hysteria presented with pseudoseizures (34.6%), abdominal pain (19.8%) and anxiety symptoms (24.7%)(13). In the present study pain abdomen and headache were the dominant presenting symptom among somatoform disorders excluding conversion disorders. Nearly half of our patients had '*la belle indifférence*' in contrast to lower incidences in other reports(8,11). Still other workers are of the opinion that it is the exception rather than the rule and when it does occur, it may be of fluctuating in nature(3).

Most children with conversion disorders were found to be polysymptomatic. In a retrospective study of 44 children (57% polysymptomatic) with conversion disorder, the polysymptomatic group had poorer prognosis(14). The authors concluded that polysymptomatic group constitutes a discrete group and considered it to have an early or incomplete form of somatization disorder(14).

In the present study 18.3% of the patients with conversion disorder had identifiable acute precipitating stressors. Recent stressful life events were evident in 31.8% and 46% of children with conversion disorder in the report by Murase, *et al.*(14) and Smith, *et al.*(8) respectively. The differing rates are possibly related to different

methodologies and definitions employed. The essential message is the need to communicate with the adolescent child during even seemingly minor acute stress periods.

Among chronic stressors, boys had significantly higher rates of poor inter-personal relations and communication problems within the family while girls had higher rates of conflicts with family members. These differences may be due to developmental differences among pubertal males and females, and cultural differences in their raising. A high frequency of family crisis (97%), unresolved grief reactions (58%) and family communication problems (85%) has been reported by Maloney(9). Murase, *et al.*(14) reported family stress in 56.8% of conversion disorder patients(14). Emotional factors and advantages of playing the "sick role" play a part in continuance of symptoms. The identification of stressors helps in formulating appropriate psycho education of the family and child.

One has to bear in mind that the present study, being an exclusively hospital based study, provides only a window view to the actual prevalence of somatoform disorders. Further, the limitation of evaluating only on suspicion and lack of follow up are also present. Hence, larger population based studies with intervention and follow up are needed to generate more data on these disorders.

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