

# PRESENTATION AND FEATURES OF CONVERSION DISORDER AT A TERTIARY CARE HOSPITAL IN KARACHI

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## ABSTRACT

**Background:** Studies have suggested that, in comparison with Western reports, conversion disorder presents differently in developing countries. This retrospective case series aims to investigate the presenting features of conversion disorder in a major tertiary care hospital in Karachi, Pakistan.

**Methods:** Inpatient records covering a six-year period (2000-2005) at Aga Khan University Hospital, Karachi, were analyzed, covering demographic details, presenting features and outcome for patients with conversion disorder.

**Results:** In all, 109 cases of conversion disorder were admitted during the study period, of which 97 were available for review. Seventy seven percent were female. Prevalence was highest in the second and third decades of life. Unresponsiveness was the commonest (42%) presenting complaint, followed by muteness (28%). Up to 60% patients had identifiable psychiatric co-morbidities, the most common being depression.

**Conclusion:** Conversion disorder in developing countries has its own unique presenting features, not prominently seen elsewhere. This may represent an overlap with dissociative disorder. The high prevalence of psychiatric co-morbidities in conversion patients should be recognized and addressed by health care providers.

In the Diagnostic and Statistical Manual of Mental Disorders of the American Psychiatric Association, 4th edition (DSM-IV)<sup>1</sup>, conversion disorders are included under the category Somatoform Disorders.

According to the DSM-IV criteria for conversion disorders, there should be at least one symptom or deficit of sensory or voluntary motor function that suggests a neurological or general medical condition. The symptom is not limited to pain or sexual dysfunction; and there is no identifiable neurological or general medical condition. The symptoms are preceded or worsened by a stressor, suggesting psychological factors play an important role in their genesis and emergence. The symptoms are not faked or produced intentionally for a gain. The presenting symptoms cannot be fully explained as the result of a general medical disorder, substance intake, or a behavior related to the patient's culture. Moreover, it is severe enough to interfere with the patient's occupational or social functioning and is serious enough to require medical evaluation.

The International Classification of Diseases 10th revision (ICD-10) classifies conversion disorder as a dissociative disorder, under the F44 category (neurotic, stress-related and somatoform disorders).<sup>2</sup>

Breuer and Freud hypothesized that 'hysteria' was the result of a traumatic experience currently hidden from consciousness.<sup>3</sup> The emotions were not expressed directly but through offering a response to the trauma. Freud theorized that the treatment of hysteria involved recalling the offending experiences to consciousness and confronting them. Once unexpressed emotions were released, they did not need to present themselves as various symptoms.

Conversion disorder can be a misleading diagnosis. In the past, up to 30% of patients diagnosed with conversion symptoms were subsequently discovered to have misdiagnosed organic illness.<sup>4</sup> However, in contemporary medical practice, with the availability of sophisticated neuroimaging techniques such as magnetic resonance imaging, missed organic illness may account for 4% to

15% of individuals initially given a diagnosis of conversion disorder.<sup>5,6</sup> To avoid this error, all patients must be thoroughly medically investigated before a diagnosis of conversion disorder is given.

Socio-demographic factors associated with conversion disorder show it is more common in married women with a family history of psychiatric illness, and people with low educational status.<sup>7</sup>

Conversion symptoms, especially when seen acutely, may resolve spontaneously with explanation and suggestion. In some patients, psychogenic sensorimotor deficits may respond to treatment in a rehabilitation unit using a behavioural approach with no other psychiatric intervention.<sup>8,9</sup> In this group of patients, the primary psychiatric disturbance has seemingly settled. They are left with neurologic deficits from which they need a face-saving exit. Active rehabilitation provides such a vehicle.

Studies on conversion disorder from Pakistan are few. They show "unresponsiveness" and "jerky movements" to be common presenting symptoms and there is a high level of psychiatric co-morbidity with anxiety and depressive symptoms.<sup>10,11,12</sup>

The aim of the present study was to evaluate the patterns of presentation of conversion disorder in our local setting, by studying the patient population presenting to our facility in Karachi. This study builds on work done at this center previously, between 1988-1989.<sup>10</sup>

## MATERIALS AND METHODS

This retrospective study was conducted at Aga Khan University Hospital, an academic medical center located centrally in Karachi. Medical records covering an almost 6-year period (January 2000 to October 2005) were reviewed. Using a computerized search program we were able to locate 109 inpatient records with a diagnosis of conversion disorder. Out of these, 97 were available for review. These comprised the study sample. A data extraction form was used to gather information from the files. This included socio-demographic details, presenting features, precipitating events, investigations, interventions, length of stay and condition at follow-up. SPSS 13.0 was used to analyse the data.

## RESULTS

Patients with conversion disorder (n=109) represented 5.1% of the 2120 psychiatric admissions over the study period. Of the 97 records available for review, there were

75 (77%) females and 22 (23%) males, giving a female to male ratio of 7:2. Prevalence was highest in the third and second decades of life (33% and 29% respectively), followed by the fourth (21%), fifth (10%) and sixth decades (4%).

Married patients comprised 55.7% of the study sample (56% of females and 55% of males). Thirty five percent of patients were illiterate; of the 65% who were literate, the majority (53%) had received at least secondary school level education. TABLE 1 lists the various stressors that correlated with onset. Domestic conflict stood out as the most common stressor followed by bereavement and financial factors.

TABLE 1: Common Stressors

Stressor	Frequency	Percent (%)
Domestic conflict	54	55.7
Death in family	12	12.4
Financial	10	10.3
Illness in Family	9	9.3
Physical Abuse	6	6.2
Substance Abuse	2	2.1
Sexual abuse	0	0

Overall, unresponsiveness was the most common presenting complaint, seen in 42% of patients (32% males and 45% females). It was also the most prevalent complaint in females. The most common presenting complaints in males were neurological (50%), usually in the form of motor symptoms (22.7%). These data are summarized in Table 2.

TABLE 2: Common Presenting Complaints

Presenting Complaint	Total no. of patients (%)	Females (%)	Males (%)
Neurological	39 (40.2)	28 (37.3)	11 (50.0)
Motor	18 (18.6)	5 (22.7)	13 (17.3)
Weakness	16 (16.5)	4 (18.2)	12 (16)
Stiff limbs	10 (10.3)	10 (10.3)	0 (0)
Tremors	7 (7.2)	4 (5.3)	3 (13.6)
Sensory	7 (6.79)	4 (5.3)	3 (13.6)
Paralysis	3 (3.1)	2 (2.7)	1 (4.5)
Pseudoseizures	27(27.8)	22(29.3)	5(22.7)
Unresponsiveness	41(42.3))	34(45.3)	7(31.8)
Muteness	27(27.8)	25(33.3)	2(9.1)
Syncopal/Fainting Spell	17(17.5)	13(17.3)	4(18.2)

Major depressive disorder was the most common psychiatric diagnosis, seen in 40% of patients, followed by personality disorder (7%), anxiety (5%), adjustment disorder (3%), psychosis (1%), acute stress reactions (1%), and bipolar disorder (1%).

A majority (79%) of patients recovered from symptoms during their hospital stay, while 7% continued to have symptoms at the time of discharge. In 13 cases (13%), status of symptoms at discharge could not be ascertained. Organic illness was diagnosed in 6 patients during hospital stay and in another 4 patients after discharge.

Seventy two percent of patients were discharged after completing hospital stay. However 11% left against medical advice prematurely, while 6% were discharged on request. In all, 43% of patients were lost to follow up.

## DISCUSSION

This study has certain limitations. Being a retrospective case note review, the information obtained is dependent on the quality of documentation. Information on a number of variables was missing. Also, as Aga Khan University Hospital is a private tertiary care facility, it may attract people from a certain section of society. The findings of this study should therefore be interpreted with caution.

The majority (77%) of patients were females with an average age of 26.8 years. A previous study from this center (1988-1989) also showed 74% female patients<sup>10</sup>, while two studies from Lahore reported 74% (average age 25 years) and 83% female patients respectively.<sup>11,12</sup> In our sample, 56% of female patients were married. This finding is in line with other studies that show a high prevalence of psychiatric morbidity in married females in Pakistan; it adds to the growing body of evidence that unlike in the West, where it is protective, marriage is a significant source of stress for women in Pakistan.<sup>13</sup>

Lower educational level has been associated with conversion disorder in some studies, such as from Sweden (where 67% of conversion patients were high school drop-outs) and Turkey.<sup>9</sup> In our study, 71% of patients had a maximum of 11 years of education. The fact that 35% of patients were illiterate also supports the idea that those with less education may have less well-developed mechanisms for coping with stresses.

However, the second highest proportion of patients (19%) had studied up to matriculate (secondary school) level, with another 29% having studied beyond this. One study

from Lahore also reported that up to 25% of their patients had studied up to secondary school level.<sup>11</sup> We hypothesize that a high educational level could lead to an increase in the number and complexity of life stresses. It seems that educational level has a more complex relationship with conversion disorder than previously reported. Alternately, the association of conversion with educational status could be an artifact of hospital-based sampling at an institution which caters to the middle and upper-middle strata of society.

Manifestation of conversion disorder in developing countries is different from those in Western societies, where from one-third to one-half of patients present with motor symptoms. In our study, the most common presenting symptom was 'unresponsiveness', similar to the previous study from this center.<sup>10</sup> Motor symptoms were present in only 19% of patients.

Alexander et al<sup>15</sup> suggest a category of 'Brief Dissociative Stupor', defined as 'recurrent episodes of unresponsiveness lasting for a few hours without convulsions or significant motor movements or verbalization', for such episodes. However, this definition limits the duration of the unresponsiveness to a few hours. On the other hand, Syed et al<sup>10</sup> suggest a more flexible term "dissociative stupor." A recent Turkish study reported dissociative disorder in almost half (47%) of conversion symptoms.<sup>14</sup> An overlap between these two disorders could account for the common occurrence of unresponsiveness as the primary symptom of conversion in the Pakistani population. The frequency of these symptoms in developing countries warrants a revision of the DSM-IV and ICD-10 criteria to make them more relevant to these settings.

In our study, 60% patients had a comorbid psychiatric disorder, the most common diagnosis being depression (38%). This finding corroborates the fact that the pathophysiology of conversion symptoms begins with a psychiatric illness — most commonly depression — that threatens to destabilize mental functioning. The somatic defence or conviction that "I am physically ill" forms unconsciously and surfaces as a fixed belief about the presence of a specific neurologic malfunction.<sup>16</sup> The high incidence of mood disorders in conversion patients has important therapeutic and conceptual implications.

In summary, conversion disorder is a challenging psychiatric disorder that requires a careful clinical approach. In particular, in developing countries the presentation may be somewhat different to what is normally described in texts. Clinicians in developing world settings should be wary of the differences in presentations

of conversion disorder. Further research is needed to fill information gaps in this somewhat baffling condition.

## REFERENCES

1. Diagnostic and Statistical Manual of Mental Disorders. 4th Edition, Washington D.C., American Psychiatric Association, 1994, pp 445-69.
2. The International Statistical Classification of Diseases and Health Related Problems, 10th Revision. 2nd Edition. World Health Organization, 2006.
3. Breuer J and Freud S. Studies On Hysteria. Volume 2, (1883-1895).
4. Lazare A. Current concepts in psychiatry: Conversion symptoms. *New Engl J Me*, 1981; **305**:745-8.
5. Mace CJ, Trimble MR. Ten-year prognosis of conversion disorder. *Br J Psychiatry* 1996; **169**:282-8.
6. Crimlisk H, Bhatia K, Cope H, David A, Marsden D, Ron M. Slater revisited: 6- year follow up study of patients with medically unexplained motor symptoms. *BMJ* 1998; **316**:582-6.
7. Binzer M, Anderson PM, Kullgren G. Clinical characteristics of patients with motor disability due to conversion disorder: a prospective control group study. *J Neurol Neurosurg Psychiatry* 1997; **63**:83-88.
8. Sullivan MJL, Buchanan DC. The treatment of conversion disorder in a rehabilitation setting. *Can J Rehabilitation* 1989; **2(3)**:175-80.
9. Teasell RW, Shapiro AP. Strategic-behavioral intervention in the treatment of chronic nonorganic motor disorders. *Am J Phys Med Rehabil* 1994; **73**:44-50.
10. Syed EU, Atiq R, Effendi S, Mehmud S. Conversion disorder: Difficulties in diagnosing using DSM-IV/ ICD-10. *JPMA* 2001; **51(4)**:143-5.
11. Khan MN, Ahmad S, Arshad N, Ullah N, Maqsood N. Anxiety and depressive symptoms in patients with conversion disorder. *J Coll Physicians Surg Pak* 2005; **15(8)**:489-92.
12. Chaudhry HR, Arshad N, Niaz S, Cheema FA, Iqbal MM, Mufti KA. Fifteen-year follow-up of conversion disorder. *International Psychiatry* 2005; **2(10)**:17-9.
13. Qadir F, de Dilva P, Prince M, Khan M. Marital satisfaction in Pakistan: a pilot investigation. *Sexual and Relationship Therapy* 2005; **20(2)**:195-209.
14. Sar V, Akyuz G, Kundakci T, Kiziltan E, Dogan O. Childhood trauma, dissociation, and psychiatric comorbidity in patients with conversion disorder. *Am J Psychiatry* 2004; **161(12)**:2271-6.
15. Alexander PJ, Joseph S, Das A. Limited utility of ICD-10 and DSM-IV classification of dissociative and conversion disorders in India. *Acta Psychiatr. Scand.* 1997; **95**:177-182.
16. Hurwitz TA. Somatization and conversion disorder. *Can J Psychiatry* 2004, **49(3)**:172-178.