Original paper

A study of clinical characteristics and psychosocial stressors in patients with conversion disorder.

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Abstract

Background: Conversion disorder is the term used in the Diagnostic and Statistical Manual of Mental disorders-Fourth edition classification system (DSM-IV). It was coined by Sigmund Freud.
Objectives: To study and stratify the clinical presentation and psychosocial stressors of patients with conversion disorder.
Method: The sample is composed of 182 patients (52 males and 130 females) referred from emergency department to psychiatry outpatient clinic. DSM-IV criteria were used to diagnose conversion disorder. The Social Readjustment Rating Scale by Holmes and Rahe which ranks the effects of life events was used in our study.
Results: (70.3%) of the patients presented with psychogenic non epileptic seizures. Of the referred cases, 76.9% have had previous history of the same condition and 31.9% had previous referral to psychiatrist. There was significant association between score interpretation of the Social Readjustment Rating Scale by Holmes and Rahe and age, gender, occupation, marital status and previous admission for the same condition.
Conclusion: Episodes of conversion disorders are triggered by psychosocial stressors the severity of which does not seem to correlate with the risk of relapse. The highest incidence of conversion episodes were detected in married, unemployed young females with lower levels of education. The prognosis of those patients improves with early identification and proper psychiatric assessment and management.
Key words: conversion disorder, psychosocial stressors, pseudoseizure.

Introduction

Conversion disorder is the term used in the Diagnostic and Statistical Manual of Mental disorders-Fourth edition classification system (DSM-IV) and it was coined by Sigmund Freud, who created a theory of conversion of the unconscious psychological conflict to somatic representation and was called Hysteria [1].
Until the seventeenth century, the term hysteria was used and it was thought to result from abnormalities of function or position of the uterus. Later, the idea became accepted that hysteria is a disorder of the brain [2]. Conversion disorder is classified as a somatoform disorder (DSM-IV) and is used to denote a group of neurological symptoms that cannot be explained in terms of known mechanisms of pathology and in which there has been a significant psychological stressor. In contrast, International Classification of Diseases (ICD-10) has classified conversion symptoms as dissociative disorders (e.g. dissociative motor disorder). According to DSM–IV, the presentation of conversion disorder can be divided into main four types:

1- Motor symptoms or deficit: this subtype includes such symptoms as paralysis, ataxia, tremor and difficulty swallowing or lump in throat.

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2- Sensory symptom or deficit: this subtype includes such symptoms as numbness, double vision, blindness and deafness.

3- Pseudoseizure (psychogenic non epileptic seizures).

4- Mixed presentation.

The patterns of defects do not usually conform to specific anatomical pathways, and symptoms may fluctuate and intensify when patients are aware that medical staffs are observing them [3].

Research about conversion disorder often suggests that its prevalence is relatively high. Engl (1983) estimated that 25% of patients admitted to general medical hospitals had conversion symptoms at some time in their lives [4].

There seems to be limited understanding of the mechanism by which psychological stress can convert into physical symptoms. Conversion disorder is attributed to conflicts or recent stressors. The relation between stress and illness (e.g. conversion disorder) has been shown by Holmes and Rahe whose Social Readjustment Rating Scale can be used to evaluate the patient`s stress [5]. The conversion of emotional arousal to physical symptoms is termed the primary gain while secondary gain refers to the external benefits that may be derived as a result of having symptoms. The somatic symptomatology of conversion disorder lessens the anxiety and gives rise to la belle indifference, where a patient seems surprisingly careless about their physical complaints.

Acute conversion symptoms may undergo spontaneous resolution following explanation and suggestion. Some patients respond to active rehabilitation. Those with chronic conversion symptoms may need admission to hospital and may undergo psychiatric assessment to reveal underlying depression or even previously hidden psychosis [6, 7].

It is essential to provide a cognitive framework for management through the explanation to patients that neurological disturbances can result from loss of conscious control over the affected function.

Aim of the Study

To cast a light on, and stratify the clinical presentation and psychosocial correlates of patients with conversion disorder in a local Iraqi community.

Patients and Method

Study design/Study Location: This is a hospital based cross-sectional study that was carried out in Marjan Teaching Hospital during the period 8th of September 2014 to 15th of February 2015. The sample is composed of 182 patients (52 males and 130 females) referred from emergency department to psychiatry outpatient clinic (all are suspected cases of conversion disorder). Informed consent was obtained from each patient before data was collected. Inclusion criteria include all patients diagnosed with conversion disorder (by psychiatrist in the outpatient clinic and according to DSM IV criteria), in addition to willingness and ability to participate in the study, while patients who refuse to be included in the study were excluded.

Tools of the study: The first part of the questionnaire includes demographic information (name, age, gender, marital status, education level and employment). Clinical presentation of the patients, history of previous admission and the previous referral to psychiatrist also reported in the present study. DSM-IV criteria were used to diagnose conversion disorder. The Social Readjustment Rating Scale by Holmes and Rahe which rank the effects of life events was used in our study. Score ≥ 150 may indicate high chance of becoming ill in the near future while a score < 150 indicates low to moderate chance of becoming ill in the near future.

Data Analysis: Statistical analysis was carried out using SPSS version 17. Categorical variables were presented as

frequencies and percentages. Pearson's chi square (X^2) test and fisher exact test were used to find the association between the categorical variables. A *p*-value of ≤ 0.05 was considered as significant.

Results

Table 1 shows the distribution of patients according to socio-demographic characteristics includes age, gender, residence, occupation, marital status and educational level. The majority (61.5%) of patients lies within the age of 20-40 years, 71.4% of them were females, 81.3% of them came from urban area, 51.6% of them were unemployed, 46.2% of them were married and only 27.4% have had higher education.

Figure 1 shows the distribution of patients according to clinical presentation. The majority (70.3%) of them presented with pseudoseizures.

Out of the total sample, 76.9% claimed a history of previous admission regarding same condition while only 31.9% of them presented with history of previous visits to psychiatrists (table 2).

Figure 2 shows the distribution of patients according to risk of becoming ill in the near future (score interpretation). The majority (61.5%) of patients presented with low to moderate risk of becoming ill in the near future.
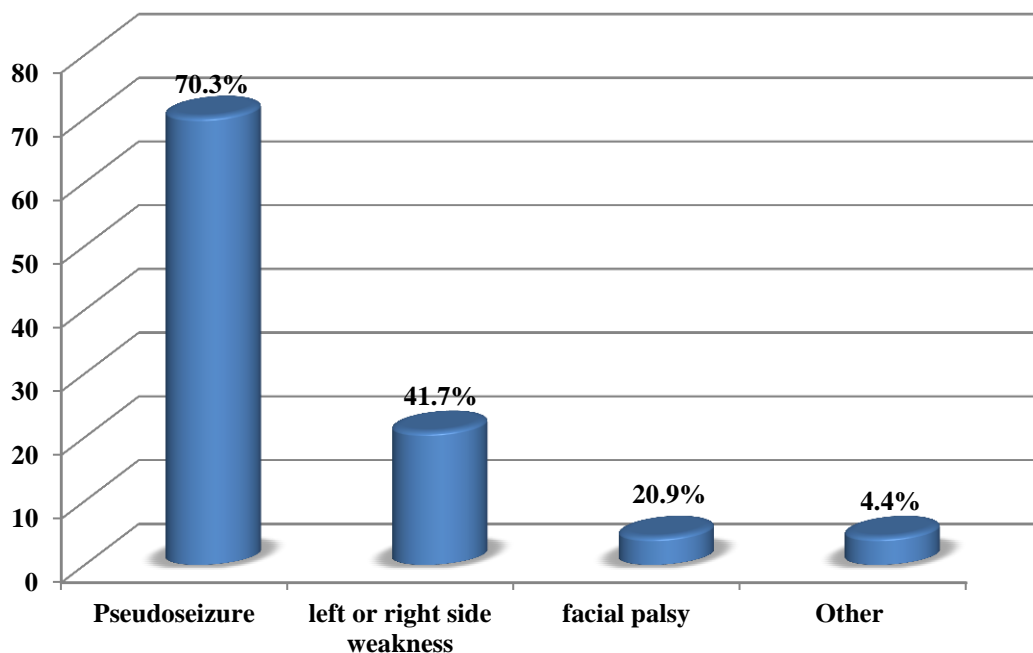
Table 1. Distribution of patients according to socio-demographic characteristics

Socio-demographic characteristics	Frequency (%)
Age	
<20 years	36 (19.8%)
(20-40) years	112 (61.5%)
(40-60) years	30 (16.5%)
≥ 60 years	4 (2.2%)
Total	182 (100%)
Gender	
Male	52 (28.6%)
Female	130 (71.4%)
Total	182 (100%)
Residence	
Urban	148 (81.3%)
Rural	34 (18.7%)
Total	182 (100%)
Occupation	
Governmental employee	38 (20.9%)
Private work	16 (8.8%)
Unemployed	94 (51.6%)
Student	34 (18.7%)
Total	182 (100%)
Marital status	
Single	60 (33.0%)
Married	84 (46.2%)
Divorced	24 (13.1%)
Widow	14 (7.7%)
Total	182 (100%)
Educational level	
Illiterate	6 (3.3%)
Primary	62 (34.1%)
Secondary	64 (35.2%)
Higher education	50 (27.4%)
Total	182 (100%)

There was significant association between score interpretation and age, gender, occupation and marital status, while there was no significant association between score interpretation and other study variables (table 3).

Table 4 shows the association between score interpretation (≥ 150 and < 150) and clinical presentation among patients with conversion disorder. There was no significant association between score interpretation and clinical presentation among patients with conversion disorder. There was significant association between score interpretation and previous admission regarding same condition, while there was no significant association between score interpretation and previous psychiatric visits among patients with conversion disorder (table 5).


*Other presentation including (tremor, numbness, hiccup and aphasia).

Figure 1. Distribution of patients according to clinical presentation

Table 2. Distribution of patients according to history of previous admission and previous visits to psychiatrists

Study variables	Frequency (%)
History of previous admission	
Present	140 (76.9%)
Absent	42 (23.1%)
Total	182 (100.0%)
History of previous visits to psychiatrists	
Present	58 (31.9%)
Absent	124 (68.1%)
Total	182 (100.0%)
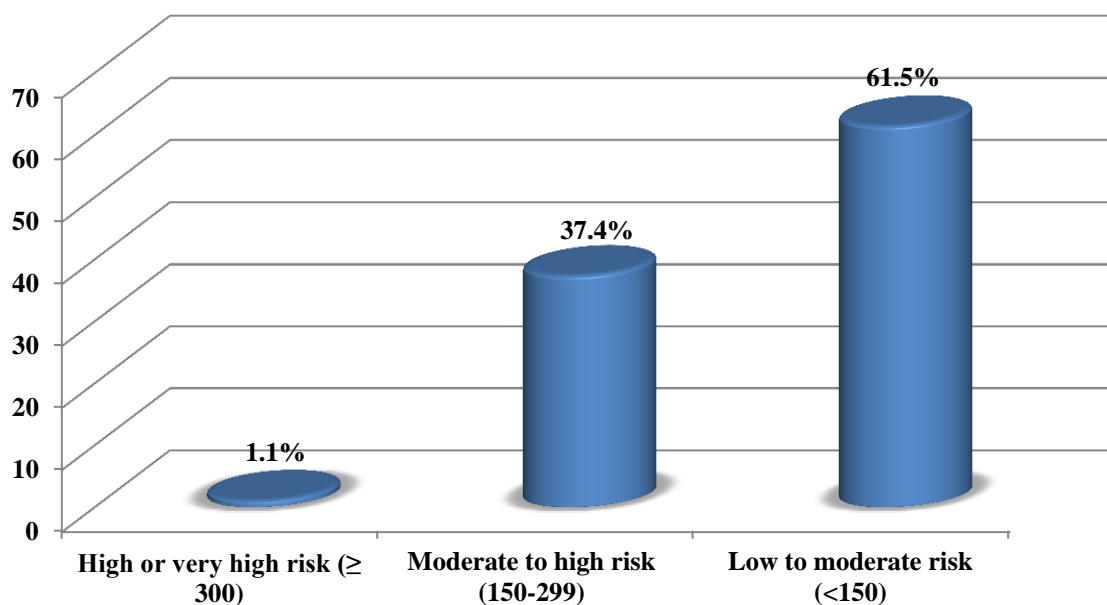
Number of the Social Readjustment Rating Scale.

Figure 2. Distribution of patients according to score interpretation

Table 3. Association between score interpretation of the Social Readjustment Rating Scale and socio-demographic characteristics

Characteristic	Score interpretation		χ^2	P-value
	≥ 150 (%)	< 150 (%)		
Age Groups				
< 20 years	2 (5.6)	34 (94.4)		
(20-40) years	48 (42.9)	64 (57.1)		<0.001**[a]
(40-60) years	20 (66.7)	10 (33.3)		
≥ 60 years	0 (0.0)	4 (100.0)		
Gender				
Male	32 (61.5)	20 (38.5)	**16.38**	<0.001**
Female	38 (29.2)	92 (70.8)		
Residence				
Urban	58 (39.2)	90 (60.8)	0.177	0.674
Rural	12 (35.3)	22 (64.7)		
Occupation				
Governmental employee	18 (47.4)	20 (52.6)		
Private work	10 (62.5)	6 (37.5)	**27.966**	<0.001**
Unemployed	42 (44.7)	52 (55.3)		
Student	0 (0.0)	34 (100.0)		
Marital status				
Single	10 (16.7)	50 (83.3)		
Married	36 (42.9)	48 (57.1)	**26.379**	<0.001**
Divorce	18 (75.0)	6 (25.0)		
Widow	6 (42.9)	8 (57.1)		
Educational level				
Illiterate	4 (66.7)	2 (33.3)		
Primary	28 (45.2)	34 (54.8)		0.098 [a]
Secondary	18 (28.1)	46 (71.9)		
Higher education	20 (40.0)	30 (60.0)		

*p value ≤ 0.05 was significant, **p value ≤ 0.01 was significant, a: Fisher – exact test.

Table 4. Association between score interpretation and clinical presentation

Study variable	Score interpretation		P-value
	≥ 150 (%)	< 150 (%)	
Clinical presentation			
Pseudo seizure	50 (71.3)	78 (69.6)	
Left or right side weakness	16 (22.9)	22 (19.6)	0.737 [a]
Facial palsy	2 (2.9)	6 (5.4)	
Other	2 (2.9)	6 (5.4)	

*p value ≤ 0.05 was significant, **p value ≤ 0.01 was significant, a: Fisher – exact test.

Table 5. Association between score interpretation and history of previous admission and previous visit to psychiatrist.

Characteristic	Score interpretation		χ^2	P-value
	≥ 150 (%)	< 150 (%)		
Previous admission				
Present	62 (44.3)	78 (55.7)	**8.695**	**0.003****
Absent	8 (19.0)	34 (81.0)		
Previous visit to psychiatrist				
Present	26 (44.8)	32 (55.2)	1.458	0.227
Absent	44 (35.5)	80 (64.5)		

*p value ≤ 0.05 was significant, **p value ≤ 0.01 was significant.

Discussion

Conversion disorders are part of the somatoform disorders that affect all age groups; the results of this study show that the prevalence of this disorder is different among different age groups and the most afflicted group is among the 20-40 year olds (112 patient 61.5%), from which 100 patients were between 20-30 years old (54.9%). The age differences seen in this study is approximate to the incidence shown by Deka et al ;in their study that was undertaken in India, the highest incidence was in the age group between 18-29 years age group (57.5%)[8]. Although several studies show even higher incidence in this age group [9, 10], other studies suggest higher incidence in late thirties [11].

Conversion disorder affects both sexes but it unequivocally affects females more than males, and in our study 71.4% of patients are female; some studies show even higher incidence in female [8,11,12].

In the present study 148 patients (81.3%) were living in urban area, a result that is concordant with the other studies [9]. It seems that one of the major causes in the wide differences in the incidence between urban and rural area is that this study was undertaken in the main Hospital in the city (Marjan Teaching Hospital) rather than district hospitals. Being unemployed, in 94 patients (51.6%), seem to confer higher incidence of conversion disorder than the other groups. Unemployment, undoubtedly, represents a major stress on the patient resulting from poverty, overcrowded households and dependence on others and these data are in agreement with other studies [9,10] , while the Indian study by Deka et al shows higher incidence among students [8]. Married people show higher incidence of conversion disorder than the other groups in our study and they also show higher stress scores (table 3). Higher incidence among married people was shown also in other studies [9, 10] while another study show higher incidence among unmarried [8]. Highest incidence of conversion disorder is seen among those whose education was limited to primary (34.1%) and secondary school (35.2%); Anradha et al study shows that the highest incidence among postgraduate level then among Secondary and primary school level [9].

Psychogenic non-epileptic seizures (P-NES) were the most frequent presentation of conversion disorder in our study, 70.3%, (Figure 3). P-NES is known to be one of the common presentations of conversion disorder in children and adults. Among P-NES, psychogenic falls and unresponsiveness were more common than convulsive type in our study; other studies seem to support these findings [8, 13, and 14].

Most cases in the present study were previously admitted to the hospital in the Emergency Department or the medical wards (76.9%), while only 31.9% of them presented with history of previous visit to psychiatrist, emphasizing the fact that a significant proportion of those patients fail to be detected and diagnosed in the medical wards or at least they did not get proper treatment.

Conversion disorder may show multiple episodes and this seems to depend on the patient's coping mechanism and the amplitude and multitude of stressors [15]. In our study we see that only 31.9% of the patients have ever received proper Psychiatric evaluation and therapy and this may also increase the risk of recurrence of the symptoms due to the lack of the knowledge about the nature of this disorder and the role of the stressors.

Couprie et al supports a better prognosis for conversion disorder other than Pseudo seizures, with 41% of patients going into relapses or having another episode [16].

Although the Majority of the sample (61.5%) presented with low to moderate risk of becoming ill in the near future, it is noticeable that the majority have previous episode of conversion disorder (76.9 %). In essence, this means that conversion episodes might be triggered at even lower scores than other mental illness which could be explained by the fact that most of the sample did not receive proper psychiatric treatment. The landmark study by Couprie et al has suggested that the more significant the improvement on discharge and the stronger identifiable stressor, the more likely it is that the patient will have better prognosis on the long term [16].

There was significant association between score interpretation and age, gender, occupation and marital status, while there was no significant association between score interpretation and other study variables. The highest score was among males .40-60 year old, those who live in urban area, non-governmental employees, divorced, illiterates and then those with higher education. There was no significant association between score interpretation and clinical presentation among patients with conversion disorder in our study.

Further studies are paramount to follow up these patients in order to elucidate the rate of recurrence following the identification of stressors and counselling and /or pharmacotherapy.

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