

ORIGINAL ARTICLE

# Psychodynamic Psychotherapy for Functional (Psychogenic) Movement Disorders

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## ABSTRACT

**Objective** As the literature for the treatment of functional (psychogenic) movement disorders (FMD) is sparse, we assessed clinical outcomes in patients with FMD who underwent treatment with psychodynamic psychotherapy (PDP).

**Methods** A retrospective analysis of the data of patients with FMD who were referred for PDP from 2008–2014 at Emory University Medical Center was performed.

**Results** Thirty patients were included, mean age at presentation was 50 years (SD 13.9) and majority were female (27/30). Most common movement disorder was involuntary shaking/jerky movements (50%) and tremor (43%). Mean duration of symptoms was 3.2 years and mean number of PDP visits was 4.9. PDP lead to good outcomes in 10, modest in 8, and poor in 9. Three patients lost to follow up. Mean duration of symptoms between two groups (good vs. poor) was not statistically significant ( $p = 0.11$ ), mean number of PDP visits showed a trend towards significance ( $p = 0.053$ ). In all cases of good outcomes precipitants of the movement disorder were identified and a majority (60%) was receptive of the diagnosis and had good insight.

**Conclusion** PDP lead to improvement in 60% of the patients which is encouraging as the treatment is challenging. This study supports heterogeneous causes of FMD including varied roles of past/recent events and demonstrates importance of psychological approaches such as PDP. Treatment with PDP should be considered in some patients with FMD but predicting who will respond remains a challenge. Further long term prospective studies with large sample size and placebo control are needed.

**Key Words** Psychodynamic psychotherapy; psychogenic movement disorders; functional disorders; conversion disorders.

Functional (psychogenic) movement disorders (FMD) represent a spectrum of neurological symptoms which are not explained by a known organic etiology. They are most often thought to be secondary to underlying psychopathology<sup>1</sup> although in some cases there is no clear psychiatric condition. FMD are a common cause of undiagnosed neurological syndromes and the disorders may mimic nearly any type of movement disorder; i.e., tremor, myoclonus, parkinsonism, dystonia, and others. The prevalence is not well known, however in movement disorder clinics it has been reported that between 2 and 20% of patients seen have FMD.<sup>2</sup> Providing the diagnosis of FMD to the patient is often challenging as this discussion requires considerable amount of time and patients are often unaccepting. This may

lead to non-compliance or refusal with regard to therapy.

FMD are often chronic and associated with considerable disability and resource utilization. Treatment is limited as there is insufficient evidence to support any approach but a multidisciplinary team has been recommended and different treatment strategies have been utilized including medications, cognitive behavioral therapy, psychodynamic psychotherapy (PDP), physical therapy and supportive care.<sup>2</sup> There are few prospective randomized trials and those reported are small and underpowered.<sup>3-6</sup> The heterogeneous nature of these disorders poses difficulty in trial design, thus it is important to gather as much anecdotal information regarding different treatment options as available to guide future studies.

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PDP has been previously utilized for different functional neurological disorders including psychogenic non-epileptic seizures and FMD and has shown some promise.<sup>3,7</sup> PDP aims to explore underlying psychopathology which may be giving rise to the neurological symptoms and the emphasis is on resolving an underlying psychological conflict. We retrospectively reviewed the outcomes of FMD patients seen at our movement disorders specialty clinic who were treated with PDP and report the results.

## MATERIALS & METHODS

For this study approval was obtained through an expedited review process from the Emory Institutional Review Board for development of a patient database and medical record review in the movement disorder clinic. We performed a database search of Emory movement disorder clinic to identify patients with a diagnosis of FMD. Thirty five FMD patients, diagnosed by a movement disorders specialist based on criteria proposed by Fahn-Williams,<sup>8</sup> were referred and agreed to participate in PDP from 2008–2014. This treatment was performed by a single psychologist (RJ). Of the 35 patients, 5 were excluded because they had both organic and functional movement disorders. This was a retrospective record review of the remaining 30 cases. Patients who completed at least one session of PDP were divided into 3 groups based on their outcomes: ‘good’ with near complete resolution of symptoms, ‘modest’ with mild improvement, and ‘poor’ with no response. The outcomes were determined based on patient report to the psychologist and by clinical exam by the movement disorders specialist. We collected the following information from the records: demographics (age, sex), type of movement disorder, duration of symptoms, psychiatric history, insight, history of trauma, triggering factors and number of sessions of therapy. We categorized PDP sessions into 3 groups with patients having 1 visit, 2–5 visits, and > 5 visits. To find predictors of response we performed a univariate analyses using *t*-tests for continuous variables and chi-square test for categorical variables in good and poor responders. All analysis was performed using SAS version 9.4 (SAS Institute Inc., Cary, NC, USA).

### Treatment description

PDP begins with exploration of early life experi-

ences, and the atmosphere surrounding the patient’s family of origin. It then seeks to establish whether these experiences correlate with the patient’s current life experiences, problematic emotions, and behaviors. The goal is first to increase awareness of the possible relationship between historical experiences to their present day problems that have precipitated their seeking medical care. Secondly, the goal is to develop new thought patterns and coping strategies that will reduce their symptoms. Table 1 summarizes the PDP approach utilized in the treatment. The duration of sessions were typically an hour or longer once per week and the number of sessions varied for each patient.

## RESULTS

Of the 30 patients included mean age at presentation was 50 years (SD 13.9 years, range 25–75 years) and the majority were female (27/30). Movement disorder phenomenology included most commonly involuntary shaking/jerky movements (15) and tremor (13), gait difficulty (6), dystonic posturing (3), voice stuttering (4), abdominal movements (1), abnormal facial movements (1), paroxysmal dyskinesia (1). Several patients (13/30) had multiple movement phenomenology’s such as tremor, involuntary jerky movements, gait difficulty and dystonic posturing. Forty six percent of patients had prior psychiatric diagnoses including depression, anxiety or both (13/30) and bipolar disorder (1/30). Sixteen patients did not have prior psychiatric diagnoses; however one patient was later diagnosed with anxiety and bipolar disorder. Out of 16 patients with no prior psychiatric diagnoses, three patients had diagnoses of fibromyalgia and/or irritable bowel syndrome. The mean duration of symptoms was 3.2 years (range 2 months to

**Table 1.** Psychodynamic psychotherapy approach summary

· Obtaining detailed history with focus on timing of situational variables surrounding symptom onset
· Exploring secondary gain for symptoms
· Identifying family of origin atmosphere to see if there is any connection with psychogenic symptoms
· Address any traumatic experience identified in initial history
· Explore possible connection between dynamics of trauma and symbolic content of psychogenic symptoms
· Give voice to possible subconscious conflict
· Address unfinished physical issues with appropriate referral or possible neuropsychological assessments

17 years), mean number of visits for PDP was 4.9 (range 1 to 21). Only 40% (13/30) of patients had follow up visits with movement disorders specialists during or after treatment with psychotherapy. Whether they stopped seeing the movement disorder specialist because of poor or good outcome or some other reason is unknown. PDP led to good outcomes in 10, modest in 8, and poor in 9. In 3 patients outcome was not clear as they were lost to follow up.

In examination of the 10 good outcome patients, a majority were receptive of their diagnosis and had good insight (6/10). The mean duration of symptoms was 1.3 years and mean number of PDP visits was 6.8 (range 1 to 21). Most of the patients (9/10) had more than 1 PDP session. In all the cases precipitants were identified, six patients had a history of past trauma that was central in the onset and persistence of symptoms. Similar to whole group, only 50% of patients with good outcomes had follow up visits with movement disorders specialist during or after treatment.

In patients with poor outcomes mean duration of symptoms was 4.6 years (not significantly different from the good response group,  $p = 0.110$ ). The mean number of PDP visits was 2.6 (range 1 to 8) and most patients (5/9) underwent only 1 PDP session. The difference in mean number of PDP sessions between good and poor groups showed a tendency towards significance ( $p = 0.053$ ). A comparison of good and poor outcomes groups is summarized in Table 2. Other factors identified to relate to poor response included lack of insight/denial by patient or family

member (8/9) and seeking disability (1). There was an association between number of PDP sessions with the outcomes in good and poor responders ( $p = 0.029$ ).

## DISCUSSION

PDP led to improvement in 60% of our FMD patients who agreed to participate (33% had good outcome and 27% had modest improvement) while 33% had poor response. The results are encouraging as treatment of FMD is notoriously challenging and patients often have persistent symptoms.<sup>9,10</sup> Previous studies have suggested that early intervention leads to a better outcome,<sup>2,11</sup> however; we did not see significant difference in duration of symptoms between groups although the duration of symptoms was shorter in group with good response (1.3 yrs vs. 4.6 yrs). The mean number of visits for PDP was higher in the group with good outcomes suggesting increased visits may improve outcomes or that those more likely to improve are more willing to maintain this approach. More than 50% of poor responders had only one session. It is possible that poor responders may have improved with additional sessions but it is also possible that their underlying disorder would be resistant to PDP in general and that was why they discontinued it. In this group most patients with poor response were not receptive of the diagnosis and had poor insight and this may be the reason for lack of follow-up.

Our approach demonstrated the presence of het-

**Table 2.** Summary of results

Patient characteristics	Good outcomes (n = 10)	Poor outcomes (n = 9)	p-value
Mean age	49.8 years	48.6 years	
Sex (F:M)	8:2	9:0	
Movement disorders (n)	Tremor (5)	Tremor (3)	
	Involuntary jerky movements/spasm (4)	Involuntary jerky movements/spasm (6)	
	Gait difficulty (2)	Gait difficulty (4)	
	Speech difficulty/stuttering (2)	Dystonia (3)	
	Abnormal facial movements (1)	Speech difficulty (2)	
	Abnormal abdominal movements (1)	Paroxysmal dyskinesia (1)	
Psychiatry history	Present (5), none (5)	Present (3), none (4) 2 patients had history of fibromyalgia and Irritable bowel syndrome	
Insight	Good (6), fair (2), poor (1), unknown (1)	Good (0), poor (7), unknown (2)	
Duration of symptoms (yrs) (mean ± SEM)	1.3 ± 0.4	4.6 ± 2.1	0.110
Number of PDP visits (mean ± SEM)	6.8 ± 1.7	2.6 ± 0.8	0.053

PDP: psychodynamic psychotherapy, SEM: standard error of mean.

erogeneous causes of FMD including varied roles of past and recent events and provides understanding into how various precipitant and past events together can give rise to FMD. This would indicate that psychological approaches are important for treatment but need to be individualized. Our results also suggest that PDP is one potential option and should be considered in this patient population. In a single blinded prospective trial on patients with FMD, Hinson et al.<sup>3</sup> found significant improvement in Psychogenic Movement Disorders Rating Scale scores in those who underwent PDP with adjunctive psychiatric medication. However, another study by Kompolti et al.<sup>4</sup> did not show significant difference between PDP vs. neurological observation/support at 3 and 6 months in a randomized cross over trial. With these results the authors suggested that continuing supportive care by the neurologist can be therapeutic and emphasized the importance of regular follow up by the neurologist. We believe that supportive care alone with a neurologist while helpful, is not sufficient as many patients can have underlying psychopathology leading to persistent symptoms that will not change until the underlying issues are addressed through PDP.

One limitation of PDP is that it is time consuming. Furthermore, treatment can be challenging as one of the perceived advantages (for patients) of having a physical symptom is that there is a fantasy on the part of the patient that there is a quick fix for it that will simply and easily handle all their troubles. Since that is rarely the case, even for a physical symptom that does have an organic etiology; the patient is often disappointed by the neurological examination results and may be reluctant to delve into the complicated unconscious conflicts that are fueling the psychogenic symptom. They may actually want to avoid bringing back the pain of such past trauma. The development of physical symptoms is their mechanism for such avoidance. Additionally, if the neurologist's diagnosis is perceived as insulting by the patient, it is possible that no treatment of any kind will be acceptable. From the psychologist's point of view, many psychologists lack experience in this area, so they too are reluctant to take on this therapy.

There are several limitations of this study; including it's retrospective, open label design and small sample size. In such studies the treatment is not uniform and reasons for discontinuation not always clear and

long term follow-up not available. The study included only patients who were willing to try PDP, which may bias the sample to those more likely to respond. We did not have data to see what percentage of FMD patients who were recommended PDP but did not pursue it. We believe that number is high. Also, we cannot rule out whether response to PDP is from placebo effect or supportive care. Larger and longer controlled trials are necessary to address these issues.

Although there are weaknesses inherent to this study, it still provides further insight into a treatment approach utilizing PDP and highlights the importance for the need of more studies utilizing different treatment options for FMD. For patients with FMD, the initial conversation with neurologist is important and emphasis should be given on clarifying the diagnosis early and in a non-disparaging way. We consider PDP as one potential treatment option and patients with good insight and receptive of diagnosis should be encouraged to undergo PDP as they have the greatest likelihood for response. Further, long term prospective studies with an appropriate sample size are needed for different treatment options including PDP, and to find predictors for good or poor response. Also, there is need for more information on the natural history of FMD as patients often disappear from our practices and may resurface elsewhere. The need for individualized therapy could be a potential barrier to well controlled blinded trials but methodologies can be developed to adjust for this.

### Conflicts of Interest

The authors have no financial conflicts of interest.

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