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PHYSIOTHERAPY BASED REHABILITATION OF FUNCTIONAL MOTOR SYMPTOMS PRESENTING AS UNCONTROLLED LEFT ELBOW FLEXION IN A PATIENT WITH PSYCHOGENIC NONEPILEPTIC SEIZURES (PNES): A CASE REPORT

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ABSTRACT

Background: Psychogenic nonepileptic seizures (PNES), also termed functional seizures, are episodes resembling epileptic seizures without the characteristic epileptic ictal discharges activity. Some patients with functional neurological disorder (FND) also present with abnormal involuntary limb movements, including dystonic posturing.

Case presentation: A patient with a previously established diagnosis of PNES presented with recurrent uncontrolled flexion of the left elbow, interfering with upper-limb movement and functional activities. The clinical assessment focused on the frequency and characteristics of the abnormal movement, elbow range of motion (ROM), functional limitations, and associated neurological findings.

Intervention: A physiotherapy programme was planned using patient education, movement retraining, attention-redirection strategies, graded functional reaching, relaxation, and a home exercise programme, in coordination with the treating neurologist and mental health professional. These interventions are based on rehabilitation principles for functional motor symptoms.

Outcome: Changes in elbow ROM, frequency and duration of abnormal movements, and upper-limb functional ability should be documented using objective pre- and post-treatment measurements.

Conclusion: Individualized physiotherapy may contribute to functional recovery in patients with functional motor symptoms associated with PNES. However, uncontrolled elbow flexion requires appropriate neurological assessment and should not automatically be attributed to PNES.

KEYWORDS: Psychogenic nonepileptic seizures; functional neurological disorder; elbow flexion; physiotherapy; motor retraining; rehabilitation.

INTRODUCTION

Psychogenic nonepileptic seizures are paroxysmal events that resemble epileptic seizures but are not associated with epileptic ictal discharges. Diagnosis requires clinical assessment and, where feasible, capture of a typical event on video-electroencephalography (video-EEG). [1,2]

Functional neurological disorder may coexist with PNES and can manifest as abnormal movements, weakness, tremor, or dystonic posturing. Physiotherapy for functional motor disorder emphasizes education, reduction of excessive self-focused attention, retraining of normal movement patterns, and restoration of meaningful activities. [3-5] Evidence specific to physiotherapy for PNES-associated isolated elbow flexion remains limited. [6-8]

This case report describes a proposed rehabilitation approach for uncontrolled left elbow flexion in a patient with an established diagnosis of PNES.

CASE PRESENTATION

A 21 years old male patient presented to the physiotherapy department with recurrent episodes of uncontrolled flexion of the left elbow for past three days. The patient reported difficulty with reaching, dressing, and other left hand specific activities.

The patient had been diagnosed with PNES by a neurologist based on Video-EEG during the typical event and Neurological examination findings. Relevant medical history included seizure-like episodes.

Clinical examination documented the frequency, duration, triggers, and movement pattern of the episodes. Assessment also included active and passive elbow ROM, muscle strength, pain, tone, sensation, associated upper-limb movements, and functional performance.

The clinician assessed whether the flexion was intermittent or sustained and whether passive elbow extension was restricted. Differential diagnoses, including epileptic seizures, organic dystonia, spasticity, and musculoskeletal contracture, were considered where clinically indicated.

PHYSIOTHERAPY INTERVENTION

Following medical assessment and confirmation of functional motor symptoms, a goal-oriented rehabilitation programme was planned.

1. **Education and reassurance:** The patient was informed that the symptoms were real and involuntary, and that rehabilitation aimed to improve movement control and function.
2. **Relaxation and breathing:** Comfortable positioning and slow, relaxed breathing were used to reduce unnecessary muscle tension and support participation.
3. **Attention-redirection strategies:** The therapist introduced external visual targets, rhythmic activities, and meaningful tasks to reduce excessive attention to the abnormal movement.
4. **Graded elbow movement:** Supported active elbow flexion and extension were practised within a comfortable range, progressing to active reaching when tolerated.
5. **Functional motor retraining:** Task-oriented activities included reaching for objects, bilateral arm movements, and simulated activities of daily living.
6. **Home programme:** Short, regular practice sessions focused on functional movement, symptom self-management, and gradual return to usual activities.

The programme was adapted according to symptom response and functional progress. Forceful stretching, restraint, and repeated attempts to suppress the movement were avoided. Physiotherapy was coordinated with neurological and psychological care, consistent with recommendations for functional motor disorders. [3]

DISCUSSION

This case highlights the importance of differentiating PNES from functional motor symptoms that may coexist with the condition. PNES is a seizure-like disorder, whereas uncontrolled elbow flexion may represent a separate functional movement symptom or another neurological or musculoskeletal condition. The presence of PNES alone does not establish the cause of an abnormal limb posture. Video-EEG and clinical neurological assessment are important when diagnostic uncertainty remains. [1,2]

Physiotherapy for functional motor disorder uses a biopsychosocial approach that addresses illness-related beliefs, excessive self-focused attention, and abnormal habitual movement patterns. Education, movement retraining, task-oriented practice, and self-management are central components of this approach. [3] These principles provide a rationale for rehabilitation in patients with functional elbow-flexion symptoms, although the effectiveness of this specific protocol requires further clinical evaluation. [4-8]

A multidisciplinary approach is important because physiotherapy does not replace appropriate PNES management, psychological treatment, or investigation of alternative diagnoses. Treatment outcomes should be reported objectively, and improvement should not be assumed in the absence of follow-up measurements.

Because patient-specific treatment outcomes were not available for this manuscript, the effectiveness of the proposed intervention cannot be established from this report. Future reports should include objective measurements of elbow range of motion, episode frequency, functional performance, and follow-up findings.

CONCLUSION

Individualized physiotherapy may help restore functional upper-limb movement in patients with PNES who also demonstrate functional motor symptoms. Management should prioritize accurate diagnosis, patient education, attention-redirection strategies, graded motor retraining, and functional goal attainment. Further case reports and prospective studies are needed to establish the effectiveness of physiotherapy specifically for uncontrolled elbow flexion.

Declarations

Patient consent: Written informed consent for publication obtained from the patient.

Ethical approval: NA

Conflict of interest: Authors declare no conflicts of interest.

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