



Functional (psychogenic) movement disorders

Evžen Růžička

Department of Neurology and Centre of Clinical Neuroscience
Charles University in Prague
1st Medical Faculty and General University Hospital

handout

*additional slides containing videos
and photographs of patients will
be shown in the presentation*

Functional movement disorders

Definition

- *causal role of psychological factors is questioned*
- *diagnosis is based on the presence of typical signs*
 - **inconsistency** in time, often depending on attention and non-physiological manoeuvres
 - **incongruence** with movement disorders known to be associated with „organic“ neurological diseases
- *basic diagnostic rules*
 - positive signs of functional origin must be present
(= diagnosis cannot be made per exclusionem)
 - clinical features incompatible with organic disease must be evident and unequivocal

Functional movement disorders

Epidemiology

- **2% cases in current neurological practice**
- **up to 10% in specialized centres**
- **3:1 women/men**
- **age at onset: mostly between 20 and 50, rare in childhood and senescence**
- **tremor, dystonia, myoclonus and gait disorders the most frequent**
- **+ non-epileptic seizures, palsies**

Common features of FMD

Suggestive history

- **sudden onset, rapid progression**
 - often following minor injury/surgery/stressful event
- **variable patterns in time, atypical spread, severe pain**
- **fluctuations in severity, spontaneous remissions and exacerbations**
- **inadequate functional performance**
- ~~• **history of**
 - previous somatizations
 - former health care profession~~
- ~~• **secondary gain: compensation claim, social allowances**~~

Common features of FMD

Clinical examination

movements and/or postures showing

- **inconsistency**

- variability of amplitude, frequency, distribution over time
- distractibility, suggestibility, suppressibility
(effect of placebo or non-physiologic procedures
inadequate improvement or worsening by various factors)
- disability is disproportionate to objective findings

- **incongruence**

- mixed, bizarre, do not present or progress according to known organic phenotypic patterns
(e.g. facial dyskinesia in hemidistribution)

Common features of FMD

Clinical examination

- **additional signs**
 - **bizarre gait**
 - **high energetic expenditure, extreme slowing of movement**
 - **false weakness, non-anatomical sensory disorder**
 - **inadequate pain**
 - **„la belle indifférence“, „facies martyrea“**

may require a longer observation and examination than for most movement disorders

Core specific features of FMD

Functional tremor

- **distractibility**: frequency changes, decreased amplitude or full suppression with distraction
- **entrainment**: the native tremor frequency is replaced with that requested to be performed in a less affected body part
- **coactivation, co-contraction**: simultaneous tonic contraction of antagonistic and/or distant muscle groups in the affected limb
- **suppresibility by contralateral ballistic movement**: brief pause or substantial amplitude reduction
- **variations** in tremor frequency, axis and body distribution

may require laboratory confirmation – surface EMG, accelerometers, ...

Core specific features of FMD

Functional dystonia

- **incongruent patterns**
 - sudden onset
 - fixed dystonia at rest from the outset
 - unusual distribution: adult onset in legs, hemifacial dystonia (including lips and platysma)
- **variable resistance** to passive manipulation
- **distractibility** or absence of dystonia when unobserved
- possible additional **late signs**
 - secondary skin dysautonomia („complex regional pain syndrome type 1“)
 - contractures

Core specific features of FMD

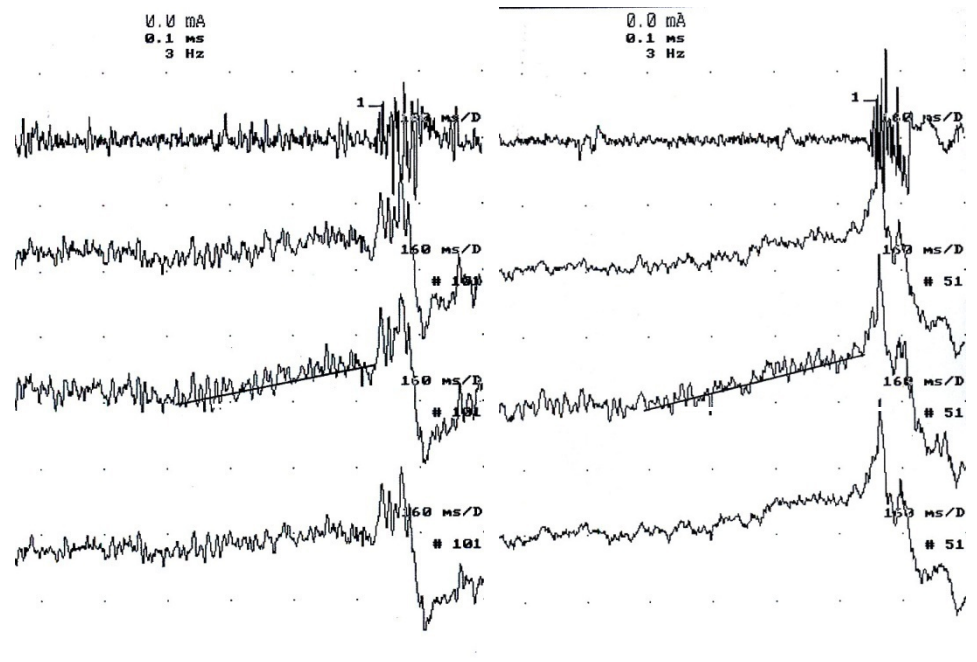
Functional myoclonus

- **variability** in duration, amplitude and distribution of jerks - less stereotyped compared to an organic myoclonus
- **distractibility**: can be fully suppressible by distraction
- **entrainment**: in rhythmic myoclonus, adoption of frequency of repetitive movements performed in a less affected body part
- **stimulus-sensitivity** (may be in organic myoclonus, too) with variability in latency of jerks
- *often require **laboratory confirmation***
 - EMG: longer duration of contractions (never <250 ms), lack of typical spread of muscle activation
 - EEG: back averaging - Bereitschaftspotential

Jerk-locked EEG back averaging

Bereitschaftspotential (readiness-potential)

- of cortical origin
- if BP present, myoclonus is likely to be functional



Core specific features of FMD

Functional parkinsonism

- **excessive slowness**, discordant with „automatic tasks“ performance (e.g. shoe lacing)
- **absence of amplitude decrement** during repetitive movements
- **atypical muscle rigidity**: no plastic resistance or cogwheeling, no increase with contralateral limb movement
- possibly in combination with functional tremor
- **distractibility**: improvement and/or changes in pattern
- **gait** very slow, often with additional features
 - extreme effort, noisy breathing, knee buckling
 - active adduction of the affected arm
- after suggestion, may respond to placebo and not to L-DOPA

Core specific features of FMD

Functional gait disorders

4 typical phenotypes of functional gait

- **unsteady gait**: excessive staggering, wobbling, with paradoxical narrowing of base (tight-rope walking); or excessively broad base
- **pseudoparetic gait**: leg stiffness, dragging leg behind, foot in external rotation, no circumduction
- **knee buckling**, usually without falling
- **excessively slow or effortful gait**: bizarre postures, high energetic expenditure, may show hesitations or freezing with normal turns

common signs

- **inadequate compensation** with uneconomic or unusual postures and/or complex acrobatic-like movements
- **distractibility**, e.g. Romberg sign improving with distraction
- **often accompanying other FMD**

Functional movement disorders

Management

- Simple communication strategies can result in a marked increase in patient satisfaction and outcome:
- make it clear that you **believe the patient's symptoms**
- emphasize that the patient has something **recognizable, common and reversible**
- explain the reasoning behind the diagnosis, **show the positive signs** of FMD and explain their potential utility for physiotherapy
- provide sources of self-help **information** (leaflets, web)
- patients can benefit from a brief, low cost intervention from a therapist specifically trained in the treatment of FMD

www.neurosymptoms.org

Functional and Dissociative Neurological Symptoms : a patient's guide



Welcome

Symptoms

Causes

In the mind?

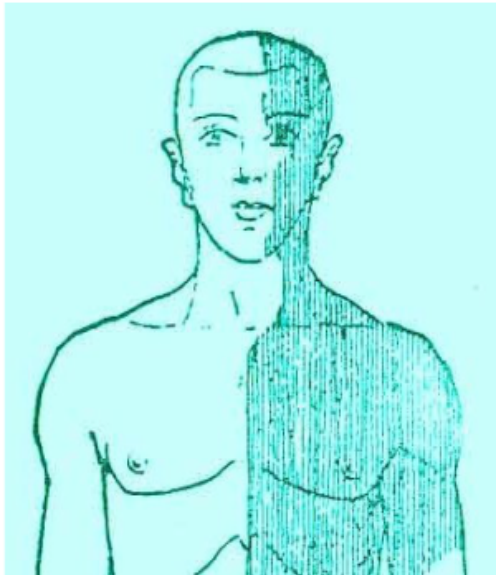
Misdiagnosis?

Treatment

Feedback

Stories

Links Downloa



This website is about symptoms which are:

- neurological (such as weakness, numbness or blackouts)
- REAL (and not imagined)
- and due to a PROBLEM with the FUNCTIONING of the nervous system, and NOT due to neurological disease.

These symptoms have many names (including dissociative symptoms and conversion symptoms) but are often described as "functional symptoms" or "functional disorders"

Symptoms like these are surprisingly common but can be difficult for patients and health professionals to understand.

This website, written by a neurologist with a special interest in these problems, aims to give you a better understanding of these symptoms. It has no advertising and does not make any money for the author.

Different language?
Click on the flag



Swedish



Spanish



Russian



Portuguese



German



Dutch



Italian



French



Czech



Slovak

How to use this website ...

Most people with functional or dissociative neurological symptoms have a combination of symptoms like "weakness, numbness and fatigue" or "blackouts and sleep problems"

Click on a symptom on the right or use the menu above to explore the symptoms that are relevant to you.

Symptoms ...

Functional Limb Weakness

Functional Tremor

Blackouts / Attacks

Functional Dystonia/Spasm

Sensory Symptoms

Functional Walking Problems

Functional movement disorders

Summary

- **functional movement disorders are not rare**
- **functional tremor, dystonia, myoclonus and gait disorders are the most frequent**
- **proper clinical examination is crucial for diagnosis of FMD**
- **positive diagnosis of FMD: inconsistency + incongruence**
- **management**
 - **make it clear that you believe the patient's symptoms**
 - **emphasize that the patient has a recognizable, common and reversible disorder, provide explanation**
 - **recommend physiotherapy, see the patient again**

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Suggested reading

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