

ORIGINAL ARTICLE

Dissociative seizures-from clinical picture to the treatment

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Abstract

Dissociative seizures are paroxysmal episodes of disturbed behaviour that bear some resemblance to epileptic seizures and are not attributable to any organic disorder, including epilepsy. Dissociative seizures are common, accounting for up to 20% of patients treated for alleged pharmacoresistant epilepsy. In many cases, the correct diagnosis is missed for several years, while patients take antiepileptic drugs without any obvious therapeutic effect. Polypharmacy is common and often the disorder is suspected only after several trials of antiepileptic medication prove ineffective. Dissociative seizures often have a poor prognosis: a majority of patients stay unemployed and their social situations remain poor even if seizures become less frequent or resolve. There have been several case series published and a number of authors have described general principles of treatment. One open promising controlled study of a successful trial of cognitive behavioural therapy has been published.

INTRODUCTION

Dissociative seizures are paroxysmal episodes of altered behaviour resembling epileptic seizures, however, there is no underlying organic cause, including epilepsy. A dissociative seizure is usually provoked by emotional stimulation or a stressful situation of which neither the patient nor the people around him are usually aware. A suffering person automatically displaces conflict impulses as they are beyond his coping potential. The seizure begins gradually and does not correspond to physiological regulation. Motor activity is bizarre, sometimes asynchronic, intermittent, with fluctuating frequency, sometimes with preserved volitional activity. We can register various limb vibrations or dystonia, from flexion and inversion of lower extremities to nowadays rarely seen bow-like position of opisthotonus. Hyperventilation can be pres-

ent before or during a seizure. Some symptoms can be attributed to hyperventilation tetany. Sometimes there are laterolateral rhythmic or jerking limb, head, or trunk movements, or anteroposterior pelvic movements. Motor activity can be modified by holding the limb or changing body position. Movements can be interrupted or complemented by crying (uncharacteristic for epileptic seizure) or smiling; the facial expression remains paralysed or neutral though. The patient rarely screams or produces sounds during the seizure. Even in pronounced "hypermotor" seizures, there is variably volitional protection of the face or limbs. Facial expression does not often correspond to rhythmic body movements. A female patient can smile or look happy while swinging a part of the body. Less frequently there is a weary face expressing suffering. Consciousness is usually fully or partly preserved and the patient generally remembers the seizure despite

having part of the memory dissociated. At the height of the seizure, a tongue is bitten very rarely as well as there are no contusions caused by the seizure, urine incontinence, or loss of consciousness. Disturbance of consciousness can lead into stupor or trance. Described motor symptoms are amenable by suggestion, both in the beginning, during, and at the end of the seizure. In the past, there were many various terms used for dissociative seizures in the nomenclature, such as pseudoseizures, hysterical seizures, hysteroepilepsy, non-epileptic seizures, conversion seizures, and many others (Scull 1997). These expressions are quite unfortunate as they convey a stigma and instigate the idea that people with histrionic personality disorder suffer from dissociative seizures. Paradoxically, these people suffer from seizures seldom as they develop in immature personalities, people who experienced trauma or in borderline personality disorders. However, they can occur in people without any personality or mental disorder as well. The term psychogenic non-epileptic seizures seems to be the choice (Vojtěch 2000; Herman *et al* 2007). However, the ICD-10 (WHO 1992) terminology is obligatory for us and classifies these fits into the group of dissociative disorders and names them as dissociative seizures. The common feature of these disorders is partial or complete loss of normal integration between identity awareness, imminent emotions and control of body movements. Dissociative disorders have a hypothetical "psychogenic" origin. With regards to time, they are linked to traumatic events, insoluble and unbearable problems, or disturbed relationships. The sufferer typically denies having such problems as he is unaware of them.

It has been found with the expansion of video-EEG monitoring in the past 20 years that 20% of people treated for epilepsy for a long time do not suffer from this illness. Seizures treated had dissociative origin (Benbadis & Hauser 2000; Hovorka *et al* 2003; Meierkord *et al* 1991). In many cases, the correct diagnosis is not made for number of years and patients are treated with antiepileptics with potentially serious adverse effects, including higher risk of teratogenicity (majority of patients are women in fertile age). Polypharmacy is widespread (Luther *et al* 1982). We start to think about dissociative disorder after a number of treatment trials have been unsuccessful. Every tenth patient is usually diagnosed with status epileptic and treated with invasive methods (Meierkord *et al* 1991). Dissociative conditions lasting more than 1-2 years are often treatment-resistant. That is one of the reasons why dissociative disorders have a poor prognosis. A majority of patients stay unemployed and live limited lives even when their seizures are resolved (Krumholz & Niedermeyer 1983). Only around one-third of patients get back to work and half of them still remain unfit to work or disabled (Ettinger *et al* 1999; Kristensen & Alving 1992). Treatment of these patients is very expensive, unsuccessful, and often leads to the symptoms becoming chronic (Stuart & Noyes 1999).

There is no simple and widely accepted model for dissociative seizures yet (Brown & Trimble 2000). Nevertheless, a majority of influential specialist in this area point to the matter of fact that there is no conscious pretension or acting of symptoms. Seizures are not consciously controlled (Betts 1990; Trimble 1983). The term *dissociative* indicates a state of altered consciousness, mediated psychologically. It is applied to a wide scale of phenomena, including those belonging to common and ordinary experiences (Putman 1991). Dissociative disorders are close to anxiety, somatoform, and posttraumatic stress disorders as pathological conditions. However, patients often deny they suffer from an anxiety or tension. A number of them describe physical anxiety symptoms and hyperventilation (Vein *et al* 1994; Lempert & Schmidt 1990). There is a plausible model of dissociative disorders that can offer (at least in some patients) a concept of the disorder as a reaction to tension, which allows patient to avoid unpleasant emotions of anxiety or thoughts about conflicting situations. However, this model is unable to explain a number of phenomena. In particular, it is unable to clarify the most prominent feature of seizures – dramatic and often bizarre motor manifestation.

Predisposing factors include psychiatric morbidity (Bowman & Markand 1996), dysfunctional family relationships (Moore *et al* 1994; Krawetz *et al* 2001; Wood *et al* 1998), and sexual abuse during childhood (Alper *et al* 1993). There are medically inexplicable symptoms in the history and patients often have high scores in dissociative experience rating scales (Bowman & Markand 1996; Kuyk *et al* 1996; Goldstein *et al* 2000, 2002; Pruter *et al* 2002). Personal experience with epilepsy can offer a model for the appearance of the seizure. Around 10 – 20% of patients suffer from concomitant epilepsy (Lempert & Schmidt 1990); epilepsy is also common in relatives or families (Bowman & Markand 1996). Similarly to somatoform disorders, adopting a sick-role and subsequent abnormal illness behaviour are important parts. Advantages of adopting a neurologically sick person's role can be unconscious and concealed. Instead, disadvantages and losses dominate outwards. Care givers and families who provide care to the patients and engage with them, can inadvertently contribute to an amplification of symptoms (Moore *et al* 1994).

PSYCHODYNAMIC MODEL

According to psychodynamic theory, dissociation is a defensive psychological mechanism, which is unconsciously used when an individual's mind is unable to cope with a particular mental content. Slavney (1994) says that a dissociation arises when "other modalities dealing with a threatening event are unpleasant or futile," and "consequently, symptoms of an individual may fulfil their purpose by preventing him from being preoccupied with deeper troubles (such as relationship problems, unpleasant duties, fear of being a failure).

These are reasons one splits conflicting material off – dissociates from conscious part of mind and therefore is not compelled to cope with it. This process has consequences on the general stability of one's mind with subsequent generation of symptoms. Dissociation can be used for one single time, when a relatively mature and well-balanced individual becomes, e.g., a victim of a rape, assault, or accident, etc. One does not experience trauma emotionally, and in some cases has amnesia. Similarly, dissociation occurs when experiences of internal conflict between two tendencies cannot be satisfied both. For example, a conflict between a desire to remain a child who is protected by parents and wants to be ideal for them, and an urge to revolt, between a desire to be with peers, revolt against parents, or possibly to start living sexually, something parents would turn down. Dissociation allows him to suppress the conflict into the unconsciousness, which brings relief. It has been said that the mechanism of dissociation is adopted as an egosyntonic strategy mostly by individuals who repeatedly experienced sexual or other abuse during their childhood, or by those who were subjected to dominant parents they never dared to disagree with. Dissociation is then used as a maladaptive unconscious strategy to deal with unpleasant experiences and contents of mind in adulthood. With the help of another defence mechanism – conversion – the patient's unbearable group of emotions, wishes, and thoughts are displaced by physical symptoms, which are generated by alteration of motor or sensorial functions and look like physical illness. This psychodynamic model of the origin of seizures as a result of unconscious conflict remains controversial, however.

COGNITIVE BEHAVIOURAL MODEL

Cognitive behavioural therapy with a number of controlled studies is very successful in treating anxiety and depressive disorders. There are little experiences in dissociative disorders, though. A number of case series and one controlled study have been reported, showing its efficiency in this indication (Chalder 1996; Miller 1948; Goldstein *et al* 2004). A cognitive approach focuses mainly on the model of "fear avoidance." Seizures are considered to be dissociative reactions to excitation stemming from confrontations with circumstances the patient is afraid of. As stress is often subjectively insoluble, he diverts attention from his worries and thus avoids stress. However, cognitive avoidance is unable to prevent a physical manifestation of a response to stress. This response acquires its bizarre picture in conjunction with cognitive and emotional processing. Consequently, seizures themselves become stressful events for patients and their relatives. Usually, they respond by over-protection and over-attention that leads to reinforcement of seizures. Once triggered, these fits are maintained by a vicious circle of behaviour, appraisal, emotions, and physiological and social determinants.

The dominant features are fear and avoidance. The patient gradually modifies particular activities and behaviour or avoids them as a result of suffering from seizures. His attention progressively begins to focus on the seizures themselves, while fear, negative excitement, and seizures carry on curtailing his lifestyle. Uncertainty generated by different specialists' opinions on causes of seizures, fear of consequences,

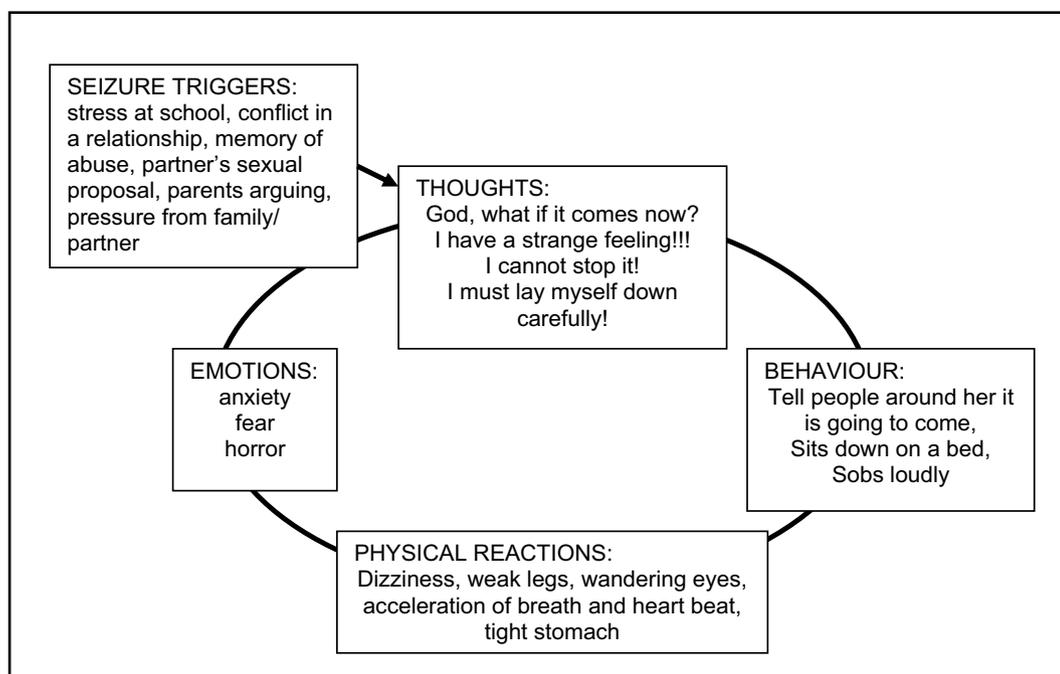


Fig. 1. Vicious circle of dissociative seizures.

secondary mood disorders, reassurance, self-monitoring, and advantages of sick-role are among additional maintenance factors. Therapeutic interventions come from this model orientated mostly on maintenance factors. There are psycho-education of patient and his family, gradual exposure to situations which patient is frightened of or avoids, treatment of mood disorder, an agreement on no further appointments with doctors, limited reassurance and reduction of care provided by relatives, and problem solving training (Goldstein *et al* 2004).

DIFFERENTIAL DIAGNOSIS

The most important thing for a differential diagnosis is to rule out an epileptic origin of the seizures. There are helpful things, such as observation of the patient during fits, when we can approach and contact the patient to some extent, the length of the seizure, which generally does not last more than 2 minutes, bizarre body movements not typical of epilepsy, versatility of movements, often high frequency, occurrence in the presence of others or when other people are supposed to be coming; the most frequent is occurrence in a safe environment (home, in hospital), higher incidence of hyperventilation. Utilization of EEG is limited due to its restricted sensitivity and specificity and potential false positive results. We can find non-specific EEG abnormalities in more than 10% and epileptiform abnormalities in 1-2% of the healthy population without epilepsy (Hovorka *et al* 2003). The absence of specific epileptiform changes on an EEG does not necessarily indicate the non-epileptic cause of seizures. Up to 80% of simplex partial seizures, mostly sensorial compared to motor seizures, have negative ictal EEG correlate (Devinsky *et al* 1988).

Furthermore, we need to rule out a physical background of seizures. Of cardiovascular system origin, syncope (ortostatic, cardiogenic, respiratory, vasovagal) may manifest as seizures. Of cerebrovascular attacks, transient ischemic attack can have appearance of a seizure. Sleep disorders (nightmares, somnambulism, enuresis, REM disorders, restless leg syndrome, narcolepsy) may imitate epileptic and psychogenic seizures (Herman *et al* 2007). Of metabolic causes, hypoglycemia must be ruled out as well. Intoxication with addictive substances of various types (and in withdrawal states) leads to quantitative as well as qualitative disturbances of consciousness, behavioural, and seizure disorders. Other typical symptoms may occur, such as tremor, sweating, increased body temperature, restlessness. It can be difficult to distinguish from simulation and fictitious disorders. Simulated seizures are driven by secondary conscious gains, such as to get disability pension or avoid punishment. This is a conscious intention. On the other hand, a patient with Münchhausen syndrome, who gives history dramatically, wants to be in the centre of attention and care of health care providers, but has no conscious profitable intentions.

TREATMENT OF DISSOCIATIVE DISORDERS

A number of dissociative conditions are likely to resolve spontaneously; unfortunately some of them develop into a chronic state. Supportive psychotherapy is always appropriate. Specific treatment of these disorders is a domain of dynamic and cognitive behavioural psychotherapy, and hypnosis. There is no comprehensive controlled research on therapeutic strategies. We are largely left to recommendations of well-known specialists. Until now, several retrospective case series have been published and a number of authors have suggested general principles of patient management (Betts 1990; Lempert & Schmidt 1990; Goldstein *et al* 2000; Iwata & Lorentzson 1976; Gross 1979; Ramani & Gumnit 1982; Montgomery & Espie 1986; Lachenmeyer & Olsen 1990; Savard & Andermann 1990; Bowman 1993). Although these studies confirmed treatment effect retrospectively (Betts & Boden 1992; McDade & Brown 1992; Aboukasm *et al* 1998), treatment approaches were not based on a coherent therapeutic model and strategies were often constructed ad hoc. Only one open study on treatment effectiveness used a clear CBT model of dissociative seizures (Goldstein *et al* 2004).

The principle of psychotherapy is to allow patient to integrate his fragmentary experiences and parts of his personality, to realise his past as well as present problems, and find the way to deal with them. Psychotherapy aspires to help the patient gain insight and remove the emotional background of dissociation. It often requires the processing of traumatic events or internal conflicts to become conscious, which can be done during the interview, imagination, letter writing, or role playing. Systematic physical exercise and rehabilitation are important parts of therapy. Imagery, as a specific therapeutic technique suitable for treatment, can be used for depiction of problems and its separation from physical reactions. Visualisation allows one to connect memories with dissociated emotional reactions and thus produce a strong abreaction. It is often necessary to train skills that would empower patients to deal with their current problems and conflicts related to the onset or maintenance of dissociative disorder. This relates mainly to communication practice. Relaxation techniques such as progressive muscle relaxation, systematic desensitization, and biofeedback are additional common strategies. Hypnosis can help facilitating availability of fragmentary experiences, to integrate split parts of the self. In some patients, the age regression might help. The amobarbital interview is documented in the literature, however, today it is rarely used.

Medication is prescribed for symptoms, but its real effectiveness remains unclear, as there has been no systematic research carried out. Since 1989, only 10 retrospective, nonrandomized, uncontrolled studies have been performed. A workshop dedicated to treatment of dissociative disorder, held in 2005, brought some hope for the future. A team of researchers designed the

Tab. 1. Diagnostic symptoms to differentiate between epilepsy, dissociative disorder, and panic disorder (Herman *et al* 2007).

	Epilepsy	Dissociative disorder	Panic disorder
Type of convulsion	Stereotypical	Variable	variable, with vegetative symptoms
Provoking factor	usually no psychogenic provocation	Moody, excited. Sometimes regular repeating provocation - certain situations, phone calls, or a calendar date	feeling moody, claustrophobic, agoraphobic situations
Frequency	Rarely more than one time per day except SPC	variable, often repeatedly in one day	Variable, sporadic, even a few times a day
Presence of other people	Sometimes, often when alone, at night	In absolute majority of cases in the presence of others, often relatives, rarely at night	generally, in claustrophobic and agoraphobic situations not necessary
Environment	Anywhere	In the room, most frequently at home	Out of the blue, in claustrophobic and agoraphobic situations
Warning signs	If present, then stereotypical, "aura"-subjective simplex partial seizure	Variable, at start sometimes hyperventilation	Hyperventilation, dizziness, pins and needles in lips and peripheral parts of the body, heart palpitation, dyspnea, anxiety
Outset	Usually sudden	Mostly gradual	Fairly quick
Scream	In the beginning of some, during seizures with vocalization	During seizure, often bizarre, symbolic content	none
Seizure	Stereotypical, tonic-clonic, tonic, hypermotor, automatism	Variable, rigidity, with random defence movements	In massive hyperventilation tetanic spasms
Biting	Tongue	Injury of lip, hands, sometimes other person	none
Wet	Quite often	Very rarely	None
Injury	Quite often	Scarce, can be present, not an exclusion criterion	None
Talking during convulsion	Rarely	Often	Yes
Consciousness	According to the type of seizure, from intact to qualitative, quantitative disturbance, to temporary loss, post paroxysmal alteration with amnesia, gradual recovery	Qualitative disturbance frequent, loss of c. possible (dissociative amnesia)	Derealisation, depersonalization, temporary loss of c. exceptional
Duration	Most often up to 30 sec – 1 minute	Minutes and longer	Minutes, one hour at longest, followed by milder protracted
EEG	Mostly abnormal interictal (approx. 10% with no epileptiform abnormality), during seizure, mostly ictal correlate	Between seizures usually normal, but can be abnormal (slow abnormality, sometimes even epileptiform), similar result during seizure, Without ictal correlate. Night seizures preceded by awakening in EEG.	Normal during seizure and beyond, sometimes unspecific abnormality in both cases
Serum Prolactine	In 90-100% of patients after generalised seizures (GTCS), double increase compared to a standard, peak 15-30 minutes after the seizure. In CPS (temporal) 43-100%, in SPC 10%	Not elevated	Not elevated
Provocation by suggestion	No	Yes	Perhaps
Treatment	Anticonvulsants	Complex treatment, cognitive behavioural or other psychotherapy, antidepressants, antipsychotics, anticonvulsants	Antidepressants (SSRI), psychotherapy

multicentric, open, double-blind, randomized study on comparison of CBT and pharmacology effect with the group with no therapeutic intervention monitored by neurologists (LaFrance *et al* 2006). Results have not been published yet. Anxiolytics may be effective for reduction of tension or anxiety, however, with regards to their addictive potential it is necessary to administer them only temporarily at the beginning of treatment. There is a better situation with antidepressants, especially modern ones can alleviate manifested emotional affects and anxious apprehension. Sometimes a low dose of a second-generation antipsychotic might help. Some case reports on anticonvulsants were carried out recently, because they function as mood stabilisers (such as lamotrigine) in this group of disorders as well. Anticonvulsants can help to stabilise the mood, prevent swinging and lower impulsivity. On the other hand, it was questioned whether to stop long-term treatment with antiepileptics in people with the definite exclusion of diagnosis of epilepsy. Oto *et al.* (2005) found out that discontinuing medication was accompanied by increased frequency of seizures in only 8 patients. Most of them had no adverse effects and decreased frequency of seizures was noted. It is necessary to repeat the study to definitely declare the safety of discontinuing medication so that patients will benefit. In addition, it has positive economic consequences.

Participation in psychotherapy (often within intentions of behavioural treatment, with the emphasis on education, counselling, and routinely including family) is associated with better prognosis (Meierkord *et al* 1991; Aboukasm *et al* 1998). Other authors did not confirm the advantage of psychological treatment, though (Ettinger *et al* 1999; Kanner *et al* 1999; Walczak *et al* 1995) did. Studies describing the therapeutic effect of psychosocial intervention showed positive impact on life style and social adaptation, apart from decreased frequency and severity of seizures (Luther *et al* 1982; Lempert & Schmidt 1990; Ettinger *et al* 1999; Kristensen & Alving 1992).

INDUCING MOTIVATION FOR TREATMENT

The first step is to elicit motivation for treatment. Treatment without motivation is not plausible as it requires considerable efforts. The patient tends to be dismissive or ambivalent in the beginning. The idea of a “mind autopsy” is threatening as he has tendency to suppress problems or not see them. If the patient or his family strongly believes that there is a physical illness, the first steps might be uneasy, as psychiatric or psychotherapeutic treatments are vehemently refused. There is a fear of stigma, gossip in the neighbourhood, prejudice that dissociative disorders are “hysteria,” mental weakness, or failure of parental upbringing. The patient and the family perceive psychiatric treatment with suspicion, often believing that medication can harm the patient and psychotherapy torture him. If there is an

adolescent, family is frightened for his future life with a psychiatric label. All these worries are exaggerated, but understandable.

The crucial initial problem is to establish a good therapeutic relationship, which may not be easy. Supervision is very important in the treatment of dissociative disorders (Praško & Vyskočilová 2010). The initial goal is to provide a safe, accepting and respectful environment and to value the patient. A therapist starts to work with the patient by carefully listening, giving empathic feedback, and openly questioning. It is important to let the patient describe all his symptoms and problems in detail, including all changes and fluctuations, and their impact on the interpersonal atmosphere in the family and at work. Similarly, it is necessary to go through the treatment history and endure patients and families slandering previous physicians as irresponsible and incompetent. One must listen to the patient’s version of the causes of the troubles, and rather avoid a conflict. Sometimes it is impossible as they come in a militant mood and determined to prove there is no mental disorder at all. Being governed by their affects, they are not open to a proper discussion. In such a case, there is no other option than to listen patiently, express understanding and belief that help can be provided any time as far as the patient is interested. We shall make ourselves clear that the fight of these people is not against us but against stigmatization and individual worries. A friendly environment for further steps is eventually created in most cases. It is necessary to express support to the patient and avoid judging his maladaptive opinions and behavioural patterns. It is better to ask what his symptoms are like, and how they affect his life and relationships, his mood, view of others and himself, and what he says to himself about them. A similar empathic approach is deemed necessary for family members despite their possible hostility. We have to reveal their wishes and needs. If the patient feels accepted and understood, he is generally willing to continue the treatment, although initially he does not have to believe in a psychogenic etiology of his problems. In such a case we carry on with motivational interviews. We employ specific strategies only when it is clear we have gained the patient’s confidence.

The key aspect of getting the patient into psychotherapy is the patient understands of the origin and maintenance of dissociative seizures. The therapist clearly demonstrates that he trusts the patient, takes his symptoms as real and not fictional, and acknowledges they are unpleasant (McDade & Brown 1992). He also explains seizures as moments when his brain “switches off” and has no control over his being. The aim of treatment is to restore this control. The nature of the dissociation process can be shown on common dissociative phenomena experienced by a majority of people. There are moments when one gets absorbed by thoughts a bit longer (“staring into nowhere”) and stops noticing his surroundings, or a situation when

one is absorbed by reading a book and not aware of someone talking to him. Other dissociative phenomena can be driving a car and thinking about some remote situations while automatically changing gears or turning the steering wheel. Later on he/she cannot recollect details of his journey. The therapist may illustrate seizures as demonstrations of the same phenomenon, more pronounced though, which emerge as a defence against discomfort, sadness, anger, or anxiety, and during strong exhaustion or stress. A trauma surgeon operating on a patient after a car accident may be such an example. He must act automatically, as he was trained, disallow his worries about the operation and mustn't put himself into the patient's suffering. Furthermore, we must say that a majority of people suffering from dissociative seizures are not able to identify triggers themselves (neither are their relatives). It can be learned gradually though, by focusing on monitoring situations, thoughts, memories, and behaviour that preceded the convulsion by just about an hour. The onset of seizures does not have to necessarily follow one particular traumatic event, but rather can reflect the stress built up during transition periods of life (such as from childhood to adulthood) or related to other periods of life (Alper *et al* 1993; Gross 1979; Griffith *et al* 1998; Buchanan & Snars 1993; Cohen & Williamson 1988). In order to put all the problems within one work-frame, we use a vicious circle depicting interactions between 3 systems: thoughts – emotions – behaviour (Picture 1) and a detailed and logical interpretation of symptoms and maintenance factors (Chalder 1996; Salkovskis 1989). Patients shall understand this avoidant and safety behaviour in relation to dysfunctional thought process, depressive moods, anxiety, and how it contributes to their maintenance (Goldstein *et al* 2004). It is also necessary to pay attention to various diagnosis and interpretations patients have been given by doctors in the past. These different opinions support insecurity and anxiety, and thus the seizures themselves. We never doubt a patient's suffering caused by the disorder. It is appropriate to invite a patient's relatives to a few group sessions (typically at the beginning, middle, and end of treatment). The therapist attempts to encourage them to support the patient in the treatment and to minimize maintenance factors (Moore *et al* 1994, Krawetz *et al* 2001; Wood *et al* 1998). They review behaviour during the seizure together and the therapist tries to teach them how to stop feeling sorry for and protecting the patient. He also discusses how to support the patient's independence. The goal is a patient controlling his seizures himself, without any assistance from family members, who act like co-therapists and instruct the patient. They may remind him of controlled breathing, relaxation, or encourage him to expose himself to a feared situation. The patient is present during the discussion about the family's behaviour, which is supposed to help him on his way to becoming independent.

COGNITIVE BEHAVIOURAL THERAPY FOR DISSOCIATIVE SEIZURES

The primary objective of cognitive behavioural therapy for dissociative disorders is to help the patient to integrate fragmentary conflicts, experiences, emotional states, and parts of his personality. Therapy helps the patient to step-by-step become aware of real actual and past problems, to connect them with emotions with the assistance of emotional restructuring, and then seek systematically a way of solving present problems. The fundamental principle of treatment is a trustworthy therapeutic relationship allowing patients to identify painful experiences, which were used for cognitive and emotional avoidance during the development of the dissociative disorder. In CBT, traumatic events or conflict relationships are often processed in the interview, imagination, letter writing, or role playing. Imagery, as one of the specific therapeutic techniques especially suitable for application in the treatment, can be used to visualise the problem, separate it from physical reactions, and thus process it gradually. We ought to teach skills which the patient can use to solve his problems or conflicts related to the onset or maintenance of dissociative disorder. First and foremost, there is communication training. Relaxation techniques such as progressive muscle relaxation, systematic desensitization, and bio-feedback are other frequently used strategies.

Elementary CBT steps in dissociative disorders are as follows:

- Behavioural, cognitive, and functional analysis (a detailed description of a common seizure: triggers, cognition, emotions, safety and avoidant behaviour, modulating factors, imminent consequences, long-term consequences: on a lifestyle, family situation, work, relationships, profound attitudes: cognitive schemata;
- Education on cognitive and emotional avoidance as maintenance factors, therapeutic intervention options;
- Monitoring dissociative states or seizures, frustration triggers, modifying factors, problems in life;
- Trigger control: to avoid or manage them;
- Change of behaviour: breathing control, relaxation, exposure, skills training: social and cognitive restructuring, problem solving;
- Exposure to: triggers, initial symptoms, traumatic memories (imagery, role playing, letters);
- Facilitating recollection of key life events and changes, demands on oneself and others, mapping of conflicts and injuries, stressful life situations, inner contradictions and tendencies;
- Emotional processing of conflicts and injuries (therapeutic letter writing, role playing, imagery work) (Prasko *et al* 2009);
- Cognitive restructuring (of schemata, in cognition, emotions, and behaviour);
- Problem solving training.

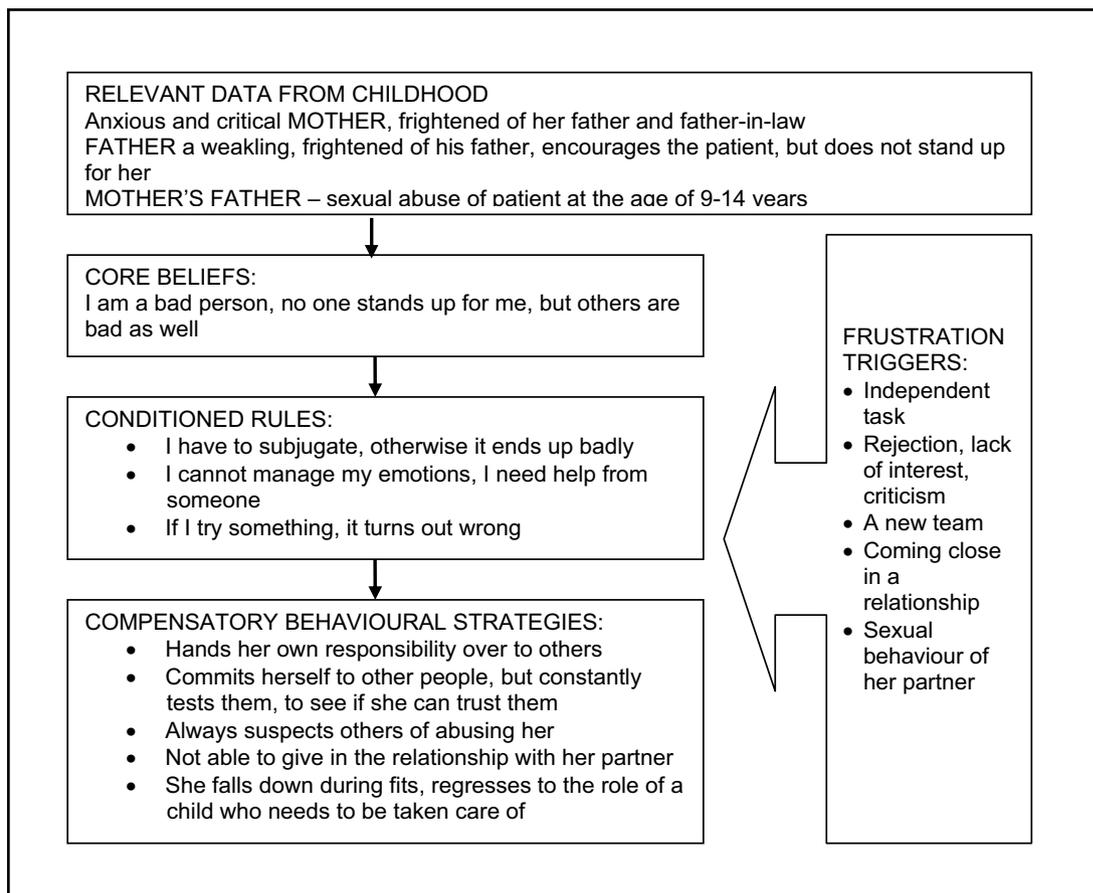


Fig. 2. CBT case formulation in 21-year-old woman suffering from dissociative seizures.

CBT IN INDIVIDUAL THERAPEUTIC SESSIONS (according to Goldstein et al 2004)

Current results of a prospective open study show that 12 CBT sessions (comprising a number of cognitive and behavioural interventions and family participation) significantly decreased the frequency of seizures and improved psychosocial functioning of patients (Goldstein et al 2004). There was a remarkable reduction in frequency of dissociative seizures (by at least 50%) in 13 out of 16 patients who completed the treatment. Seizures resolved completely at the end of the treatment in 4 patients, were not present in 6 months follow-up either, and in another 3 patients, after a month of the treatment and in the follow-up as well. Improved psychosocial functioning at home, work and leisure time was significant both at the end of treatment and in the follow-up. Avoidant behaviour, general anxiety, and depression scores were also significantly reduced. Although the insight of participants into the putative emotional origins of dissociative disorder was not substantially changed, their belief that there was a physical cause of their illness receded. This corresponded to improved occupational and social adaptation, as measured by IPQ (Illness perception questionnaire). Con-

fidence in one's own capacity to control seizures also increased. Capacity to work improved in 5 patients, who were not working at the beginning and started to work. Antiepileptic medication was stopped in all patients during the study, thus having an economic benefit.

According to the study protocol, the first and second session should focus on detailed behavioural assessment, introduction of a diary of seizures, and explanation of treatment philosophy (Chalder 1996). It is necessary to explain that the patient does not suffer from epilepsy and clarify the treatment approach with family and care givers. It is important to encourage them to stop taking patients to various physicians, calling emergency in case of seizure, or taking them to the hospital. Such behaviour leads to reinforcement and deepening of seizures. Relatives are instructed to prepare instruments for safe seizure management at home, to support the patient's independence, to change their own reactions – first and foremost to reduce over-protection

(Goldstein et al 2004). Sometimes it is very difficult to persuade relatives and it may not be successful the first time as the family is often frightened of stigma more than the patient. No wonder they find insufficient information in old-fashioned books or on the Internet. They are prone to reject a psychiatric diagnosis and

look for a somatic one in order to fight off emotions that they have failed as parents or partners. This fight against the psychiatric label sometimes results in putting off the adequate treatment and the petrifying of symptoms.

Treatment between the third and fifth sessions is aimed at the technique of diverting one's attention and the change the focus (i.e., diverting attention from seizures to other physical or mental activity or outside environment) (Kenderley 1996). The patient simultaneously practices breathing control and applied relaxation (Ost 1987; Powell 1992), so that he can use the techniques when feeling a seizure coming or during it. The patient is trained to recognise warning signs, when the best time is to apply these techniques. Training helps patients learn that they are able to gain control over seizures. Gradual exposure to situations and activities which the patient avoids, is an important home assignment between sessions. Exposures should be done every single day, better repeatedly. The patient is also encouraged to describe practical problems he encounters in his life and thus learns strategies for problem solving (Hawton & Kirk 1989). In the beginning of each session, home assignments are reviewed and goals for the next week are set. Cognitive restructuring starts in the fifth session and is focused on identification of the maladaptive style of thinking that can maintain low self-confidence, negative views of the future, and beliefs about the uncontrollability of seizures. Then the patient learns to re-frame these thoughts and to seek alternative thoughts and views (Gelder 1989). At this time, processing of traumatic events and inner conflicts can be introduced. We often use imagery techniques to change the event in patient's imagination so that he can imagine managing the past situation in the more adaptive way.

The sixth session is targeted at reviewing steps up to the present and identifying problems to be addressed in next 3 months. The presence of relatives allows discussion of their view of the patient's progress and as a result, identification of other problems which need to be addressed in subsequent sessions.

In the tenth and eleventh sessions we emphasise relapse prevention and prepare for termination of the treatment (Beck *et al* 1979). The patient draws a detailed plan for the future, what he will do, what problems he expects, or how he is going to deal with them. He reviews skills and knowledge learned during treatment with the therapist and prepares a contingency plan (how to use them in the event of symptom recurrence).

Active treatment ends with the twelfth session, in which we review the patient's progress. We usually invite relatives again. All together they discuss what to do in the future, if symptoms recur.

There is one more session for the patient after 6 months, when the present state is reviewed again. Apart from dissociative seizures, other common problems are discussed.

CONCLUSION

CBT has been successfully applied in somatoform disorders (Speckens *et al* 1995; Kroenke & Swindle 2000), which are disorders with characteristic long-term physical symptoms. Conversely, dissociative seizures have a paroxysmal nature and were diagnosed as epilepsy in the past. Experience of seizure often leads to the development of avoidant behaviour, related to fear of having a fit in a potentially dangerous situation. CBT instructs the patient how to respond when first predictors of a seizure emerge. It guides the patient step by step in the exposure to feared situations and shows him how to disrupt the seizure at the beginning and regain control over himself.

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