Psychopathological hand disorders: a rare somatoform reaction to psychological conflicts

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Mind and body exert powerful effects on each other. Bodily symptoms can be the manifestations of some changes in the inner world of an individual. These manifestations have been explained in the concept of “somatoform disorders.” According to the latest edition of Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), somatoform disorders consist of conversion disorder, somatization disorders, pain disorders, hypochondriasis, and body dysmorphic disorder. The common denominator of all of them is the existence of one or more of the physical symptoms that cannot be explained by a general medical condition [7]. However, in some countries, especially in developing eastern ones, depression can also show itself through somatic symptoms. The WHO collaborative study on standardized assessment of depressive disorders that assessed 583 patients in five centers around the world showed that the somatic symptoms were commonest in Tehran and least in Basel and Montreal. Among some cultures, talking about emotions is prohibited and is a sign of weakness. Hence, somatic metaphors and complaints become the main outlets for emotional discharge [14]. Delicate changes in some parts of the brain result in sensory-motor changes and disturbances of functions of internal organs. This relationship has a symbolic meaning in the mind of people. The affected part of the body is not chosen by chance. For example, a young girl might suffer from a temporary blindness in response to some traumatic events that she experienced in her family. Also, different

types of emotions can bring about different bodily reactions and clinical manifestations. The four basic-emotion command systems, explained by Panksepp [12]—reward, rage, fear, and panic systems—can illustrate different behavioral manifestations of somatoform disorder patients. The emotional turmoil of somatoform patients which is released by physical symptoms may be explained by these systems. The underlying mechanisms of a “medically unexplained symptom” can be understandable by referring to one of these emotions.

Psychopathological hand disorders have been divided into four categories by some authors [6], including factitious wound creation and manipulation, factitious edema, psychopathological dystonias, and psychopathological sensory abnormalities and psychopathological complex regional pain syndrome. Eldridge pointed out that three psychiatric conditions are involved in these disorders: factitious disorder, malingering, and conversion disorder [6]. Clenched fist syndrome (CFS) and psychoflexed hand are two forms of psychopathological dystonia which result in abnormal hand postures. Flexion contraction of the ulnar three digits of the palm is seen in CFS, and although the thumb and index finger are unaffected, the hand conformation is seen in a fist. In this condition, swelling is usually present, and no correlation with handedness has been reported. Also, it occurs in different age groups and is associated with various psychiatric disorders, including depression and schizophrenia [15]. Rajmuhan and his colleagues have also reported a case of camptocormia, a condition characterized by severe frontal flexion of the spinal cord and knee with 2 years duration in an Indian adolescent girl [13]. In psychoflexed hand, swelling is often minimal; the dominant hand is involved, occurring in the middle-aged group, and none of the patients' fists are entirely clenched [4, 9]. Psychoextend hand in which the digits are held in rigid hyperextension is also reported by some researchers [15]. We reported elsewhere

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a case of psychoflexed hand in a young lady as a conversion reaction to her feeling of loss [8]. In this paper, we discuss this case and another patient who referred to our clinic with a clenched fist manifestation in the light of four basic emotions described by Panksepp and theory of attachment.

Case 1 (Miss S): as we discussed in the aforementioned article [8], Miss S was a 23-year-old, single woman who was referred to the first author by a hand surgeon (the third author) about 6 years ago with flexion contraction of the left hand. Her left wrist was totally bended over her forearm in a U-shaped manner (Fig. 1). She had maintained her hand at this position for 6 months.

When she came to our clinic, she looked depressed and had little eye-to-eye contact. She was hostile and had evasive attitude combined with a pessimistic view about her future. She was talking about a car accident that had happened 2 years before during which she had seen the driver's wrist being cut. She also mentioned that her fiancée died in a car accident few months after that event. She expressed remarkable guilt about these two accidents. Her flexed hand returned to its normal position after three sessions of hypnosis. However, her hand returned to the abnormal position after a few weeks (Figs. 2 and 3). She had a manipulative and demanding character and blamed the staff and physician for not being able to help her. She insisted on surgical interventions and eventually referred to an orthopedist who accepted her request for surgery. Her wrist was fixed, and an apparent normal position was returned to her hand. Not surprising for us, the other hand and also the operated hand began to bend after a few months (Figs. 4 and 5). Also, I (the first author) had to admit her in the psychiatric ward because of hysterical paraplegia. All of her symptoms were subsided by suggestions under hypnosis. She has continued this

Fig. 1 Miss S: position of the hand before hypnosis

Fig. 2 Miss S: position of the hand after hypnosis

relationship pattern up to now. After a few months of temporary relief of her symptoms, I expect her to return with a flexion contracture in her right hand, a bending and deviated position in the operated hand, or paralysis of one or both lower extremities. These repeated conversion attacks and her sad, hostile, angry, frustrating, and tenacious attitude (SHAFT syndrome) [6] are indicative of borderline personality organization [11]. These individuals are known to be unstable and angry. Their interpersonal relations are stormy and intense. Many of them engage in self-destructive behaviors, and their anger can direct toward themselves or others.

Case 2: Miss F, a 16-year-old adolescent right-handed girl, who referred to us because a clenched position in her left hand started after an accident when she was 6 years (falling down) (Figs. 6 and 7). She pointed out that this event happened when she and her sister's friend had gone out of home. Her report was based on her family members' statements rather than her personal retrievals. She had no

Fig. 3 Miss S: position of the hand after hypnosis

Fig. 4 Miss S: position of the hand a few months after operation

Fig. 5 Miss S: returning of both hands to pathological position after operation

clear memory of this experience and her childhood in general. She also said that she was not able to walk for a while after that event. In physical examination, the thumb was unaffected. Despite penetration of the nails in the skin of the palm, there was no evidence of irritation or injury. Swelling was not present. Neurological examination, electromyography, and nerve conduction studies were normal.

According to her, the hand began to bend and clench after that event, and it has maintained its position up to the moment. She revealed that her father had re-married when she was 2 years. She had grown up with two women in a single house. She did not point to any difficulties during her childhood and described this period as “good.”

In mental status examination, she showed a remarkable degree of resistance to talk about her past and presented a cavalier attitude toward her problem (*La belle indifférence*). Psychological tests, including Rorschach and TAT, were in favor of alexithymic (no word for emotions) and narcissistic traits in her personality. Also, the attachment style questionnaire showed a dismissive style in her behavior.

She has had no response to hypnotic suggestion. Under hypnotic trance, whenever I (the first author) asked her to open her fist, she clenched the fist stronger which can be a

manifestation of her resistance to the treatment and her stubborn, negativistic personality.

Discussion

These two vignettes show the importance of reciprocal relationship between the mind and the brain. Both of them

Fig. 6 Miss F: a clenched fist posture

Fig. 7 Miss F: a clenched fist posture

have been suffering from emotional turmoil in their lives and have discharged their energy by somatic route. Miss S is a clever and bright girl who tolerates a remarkable degree of guilt related to previous losses. Anger is the predominant emotion that plays a significant role in her presentation. This anger is directed toward both herself and others. She has adopted a self-destructive course in her life. Instead of total annihilation of the self by acute suicidal act, her choice has been a chronic and step-by-step extermination of some parts of her own body through self-torture. Maybe, this approach has prevented her from killing herself. Also, she blames her family members, especially her mother, for their shortcomings and shows her anger toward them through this behavior. Behind the mask of SHAFT syndrome, you could see the feature of a helpless, needy, and dependent child who is searching for parental care. Wallace and Fizmorri described this syndrome as a passive form of Munchausen's syndrome in which a patient submits to multiple surgical procedures to a part of the upper extremity [17]. However, according to Graham and his colleagues, SHAFT patients fall into two categories. The first group inflicted physical harm on themselves, creating factitious injuries. The second group postured their limbs in attitudes that are not explainable anatomically [10]. This later group is described by Simmons as the clenched fist syndrome [15] and can be applicable to Miss S.

Her mode of attachment is an anxious-ambivalent style as described by Bowlby, Ainsworth, and other attachment theory authorities [2, 3, 5]. This means that she had been suffering from insecurity during childhood. Whereas she approaches others with a relatively ambivalent attitude, her internal working model is negative. She prefers to adopt a victim role and escape from the responsibilities of an adult life. Although her childish and demanding behavior is suggestive of other diagnoses such as factitious disorder, we did not find any evidence in its favor. Factitious disorder can be positively diagnosed when the patient admits her behavior or is caught self-inflicting the injury [1]. Diagnosis can frequently be possible by exclusion. Her condition has remained rather

unchanged since 6 years ago. She has not responded to any trial of insight-oriented psychotherapy. In the last session, she was looking for another orthopedist to operate her right hand and expressed a strong wish for amputation. The most probable diagnostic formulation is that we are dealing with a patient suffering from a chronic depression accompanied with a repeated conversion attacks as a symptom of a more generalized psychopathology which is rooted in her personality.

Hand deformity in Miss F had started earlier than Miss S. The absence of childhood memories and the connection between this and the accident of falling down is meaningful. The possibility of the occurrence of a traumatic event that has been repressed should be considered. She could just remember the moment of falling down. Talking with her was confusing and frustrating. According to the report of the psychologist, psychological tests were indicative of a conservative, inhibited, insecure, depressed, and narcissistic personality which avoids complexities in the environment. She is afraid of close ties and has a low level of empathy. She avoids expression of emotions because of her underlying fear of rejection.

Apparently, the polygamic, crowded family has derived her to adopt an avoidant style and repression of emotions. She has also had an insecure attachment style. However, her model of self is relatively positive, whereas the model of Miss S is negative. She showed lesser degree of anxiety and inferiority feeling. Fear and panic (separation-distress), as described by Solms and Turnbull [16], are emotions that she has experienced since early years of her life. But, she has compensated such feeling by recruiting defense mechanism of denial and isolation, and an avoidant, detached behavior. Her hand position is rather representative of her effort to safeguard herself as well as to protect herself from outside danger (compared to anger of Miss S).

Conclusion

Psychopathological hand disorders, including clenched fist syndrome and psychoflexed hand, are somatoform conditions which represent “conversion” of emotional turmoil to physical symptoms in a symbolic manner. Review of literature shows few reports of these disorders. Prognosis seems to be poor [6, 15]. This fact is partly related to the interdisciplinary nature of the problem. The patient needs simultaneous psychiatric, neurologic, and surgical help to reach both the proper diagnosis and management. Without considering the underlying psychological conflicts, invasive procedures are not helpful. Involvement of the key family members can be helpful for the patient to overcome the feeling of loneliness and helplessness. On the other hand, unnecessary and too much attention can be a rewarding response which keeps the situation unchanged.

The patients need consistent, supportive care by their therapist to help them to get more adaptive solution for their problems. The therapist needs to know the protective role of the symptom and the patient's need to keep and maintain this posture. In some patients, as we have seen in Miss S, the symptoms protect them from more destructive behaviors. This behavior shows the need to cope with unbearable psychological distress and to regain a sense of stability. These needs have to be addressed before any corrective intervention.

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