

Auto-amputation in a severe depressive episode with psychotic symptoms: case report

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Summary

A 56-year-old patient was admitted to a local orthopedic surgery and traumatology department after self-mutilation of her upper-left limb in the form of left wrist exarticulation and broad injuries to the left forearm. The patient was later transferred to the department of psychiatry and psychotherapy. She was diagnosed with recurrent depressive disorder and a severe episode with psychotic symptoms. Electroconvulsive therapy was applied. Twelve procedures were performed with good result. Psychopharmacology was continued. Patient's medical history revealed a significant reduction in antipsychotics. Limited communication with the patient and unfamiliarity with individual characteristics of her psychotic relapse at her last psychiatric consultation were the reasons why psychotic symptoms had not been recognized.

Conclusions: A thorough diagnosis should always be carried out, based not only on complaints reported by the patient and observed by their environment, but also on the clinical picture of patient-specific psychosis. Failure to recognize psychotic disorders can have serious consequences for the patient, including auto-amputation.

self-harming, self-mutilation, auto-amputation, severe depressive episode with psychotic symptoms, electroconvulsive therapy

INTRODUCTION

Self-harming, defined as an intentional, direct injury to the body tissue (skin surface) without suicidal intentions, is a phenomenon that evokes extreme emotions. Sharp, violent acts of self-harm often cause disgust and fear in other people, including in medical personnel. Deliberate acts against one's own body seem to be in fundamental conflict with general social standards. Therefore, despite the fact that the cultural context of self-harming appears to be more complex and ambiguous, both the acts and the per-

son who self-harms are frequently rejected by the environment.

In various societies throughout history, enduring physical pain and suffering was not only a form of punishment, but also a type of ritual, one that was supposed to bring fortune and protect from disaster. Self-harm was a part of religious, healing, burial or sexual rituals in various cultures. It symbolized sanctity or purification. According to Girard's concept [1], the meaning of sacrifice through self-harm is based on a belief that controlled and planned aggression is needed to prevent acts of aggression on a large scale. Specific types of self-harm were sanctioned by society and controlled by ritualization and symbolization.

Moreover, in some cultures an injured body was an indicator of social status, or beauty. Body

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modifications such as piercings or tattooing, undeniably forms of self-harm, have become more acceptable in modern society. In this context, the boundary between “normal”, culturally acceptable self-harm, and a pathological, deviant act seems to be blurred [2].

Nevertheless, particular types of auto-aggressive acts, especially serious self-injuries, are associated with certain psychiatric disorders. Although not every person who performs self-injury is diagnosed with a psychiatric illness, the presence of certain types of psychiatric disorders increases the risk of self-harm [3].

An increased risk of self-mutilation is observed mostly in autism spectrum disorders, borderline personality disorders, bipolar disorder, depression, phobias and behavioral disorders [4,5]. Other risk factors include schizophrenia [6], overdosing on psychoactive substances and some personality traits, such as impulsiveness or poorly developed problem-solving skills [4].

CASE DESCRIPTION

A 56-year-old patient was delivered in an ambulance to the emergency room of a local vascular surgery department with an enucleation in the left wrist and extensive wounds affecting half of the left forearm, including damage to all blood vessels, nerves, flexor muscles and the majority of extensor muscles. The patient was conscious, with efficient respiration and circulation. There was no verbal contact, the patient did not respond to any vocal commands. She reacted only with facial expressions, responding to pain. She was consulted by a psychiatrist. Considering lack of patient cooperation, a full psychiatric examination was impossible. According to medical history, the patient was discovered by her husband in a bathtub filled with water, with part of her arm cut off and lying in the bathroom sink. According to her son, she had not manifested any suicidal tendencies before.

Head computed tomography (CT) and a neurological examination did not show any abnormalities. Because of the extent of the damage, amputation of half of the patient's left forearm was performed in an orthopedic surgery department. After the surgery, the patient declared su-

icidal thoughts and asked her family for assistance in the completion of suicide. On the third day of hospitalization the patient was transferred to the department of psychiatry and psychotherapy. She did not give consent to psychiatric hospitalization, therefore she was admitted under the Mental Health Protection Act 1994 (Article 23).

Psychiatric assessment revealed that the patient was alert and fully aware, in superficial verbal contact, which was made difficult because of psychomotor retardation. Her mood was indifferent, with blunted affect. No signs of psychomotor restlessness. Basic activities of daily living were preserved. No evidence of overt psychosis. She declared retrograde amnesia concerning the circumstances of her self-amputation. She denied any suicidal ideation. Dissimulation was not excluded.

According to the patient's husband, she had been treated in an outpatient mental health clinic. The deterioration of her mental state was sudden and occurred 4 weeks before hospitalization. The patient had reported weakness, anxiety and decreased daily activity. She declared feelings of guilt, low self-esteem, and a belief in being laughed at.

According to the patient's documentation from the outpatient clinic 10 days before the self-injury, during a follow-up examination, a substitute psychiatrist did not recognize any psychotic symptoms or register any information about suicidal thoughts, or about the quality of verbal contact with the patient. However, pharmacotherapy was changed radically: olanzapine was decreased from 20mg to 5mg, venlafaxine 225mg was discontinued and paroxetine 20mg was added, up to a total dose of 40mg after a week; treatment with mianserine 20mg/day remained unchanged.

During the first days of hospitalization in the psychiatric department olanzapine 5mg/day and venlafaxine 225mg/day were administered, while mianserine was discontinued. A major depressive episode was recognized. Verbal contact with the patient was difficult. Her responses were brief and evasive. Her medical history was examined. She had been treated psychiatrically since 2011. She was hospitalized 4 times on psychiatric wards and diagnosed with acute polymorphic psychotic disorders without schiz-

ophrenic symptoms. Alzheimer disease was suspected in 2011, organic delusional disorder in 2012 and recurrent depressive disorder with psychotic symptoms in 2014 and 2016. T2 images of head's magnetic resonance with contrast revealed a focus of circa 5mm in diameter in the pale globe on the left side and less expressed symmetrical changes on the right side. Another examination in 2013 showed no further changes.

During periods of mental state deterioration, the patient usually expressed low mood, suffered from psychomotor retardation, displayed delusional content and her memory was disordered. It should be noted that before the periods of a psychotic state relapse, the patient was less sociable and tended to dissimulate. In the first days of the first, second and fourth hospitalization the patient presented aggressive behavior and psychomotor agitation. During the fourth hospitalization, at the turn of 2015 and 2016, the patient claimed that her son's eyes had been gouged out and his hands cut off.

The patient had never shown either suicidal thoughts or tendencies in the past. Medical history, the patient's behavior and her husband's account indicated a psychotic character of her depression. A decision was made to increase the dose of olanzapine to 10mg/day and to introduce electroconvulsive therapy (ECT), simultaneously continuing with pharmacotherapy. Internal anesthesiological or neurological consultations did not show any contraindications for ECT performed in general anesthesia. Therefore, a series of 12 procedures was performed on shock treatment machine (model MECTA Spectrum 5000), with the maximum amount of electric charge applied at 192mC. All procedures were carried out without any complications. The patient presented a reserved attitude in the course of hospitalization. Asked about the reason for her self-mutilation, she gave evasive, indirect answers. The patient claimed 'it was a silly thing to do' and tried to joke about her resultant disability.

On the 17th day of her hospitalization another surgery was performed because of infection and left upper limb stump necrosis. In the last weeks of hospitalization the patient took part in therapeutic activities willingly and would go out on walks with her husband. However, she remained reserved and avoided answering ques-

tions about the reason for self-harming. She appeared to underestimate the gravity of the act. The patient was on a home pass twice. We know from her husband that both home visits were satisfactory, even though she had difficulty getting used to the new situation and was ashamed of her disability. Stabilization of her mental state was achieved through treatment.

DISCUSSION

The case presented here is one of a rare, but exceptionally brutal, episodes of severe self-mutilation. Available data suggest that psychotic motives were plausibly responsible for this act. Favazza & Rosenthal distinguished three different types of self-harm. Superficial or moderate self-harm occurs most frequently in people with personality disorders. Self-mutilation associated with stereotypical behavior is usually an effect of intellectual disability. Serious self-mutilation, such as one described in this case, is usually associated with severe psychopathology [7]. Severe body damage or auto-amputation is usually associated with psychotic disorders of diverse etiology [8].

Available data suggest that patients with a history of self-injury suffer from significantly more severe depression symptoms. They report a higher intensity of suicidal thoughts. They are more frequently hospitalized on psychiatric wards and they have a longer medical history in comparison with patients who have never self-harmed [9].

A connection between self-mutilation and suicide is complex. The simplest way to distinguish those behaviors is on the basis of intentions, method and achieved psychological effect [10]. Patients performing self-harm declare a wish to lessen the intensity of negative emotions through their behavior, lack suicidal intentions and are able to recognize the difference between self-harm and a suicidal attempt [8]. Nevertheless, there is evidence for a strong connection between self-harming and suicidal tendencies. Empirical data show that as many as 40% of examined people considered death by suicide during an act of self-injury [11], and between 50 and 80% of people performing self-mutilation had made at least one suicidal attempt [12].

Epidemiological data from the United States suggest that one case of suicidal death happens for approximately every 25 suicidal attempts. The rate of people in the non-treated population who performed at least one act of self-harm in their lifetime is approximately 4% among adults and 11–39% among teenagers. In psychiatric patients the rates are even higher: 21% for adults and 40–69% for adolescents [13,14]. The available data indicate that most cases of self-harm occur in the course of bipolar disorder and a recurrent depressive episode [15].

Acts of severe self-mutilation constitute a great challenge both for psychiatric and for surgical or orthopedic department staff, and require a close cooperation between doctors of different medical specialties. Where rapid surgical intervention is performed, a successful replantation of an amputated limb is possible [16]. Unfortunately for the patient in the present case study, she was not accepted to the replantation center. This was due to an inability to precisely establish the time of the self-mutilation and lack of information about her neurological state. One of the previous CT head scans showed a hyperintensive focus in the pale globe on the left side in the T2 sequence, which could have been relevant. Changes of this kind are often observed in patients suffering from depression [17].

The patient was treated efficiently with a series of shock treatments in the course of hospitalization. ECT is a therapeutic method strongly recommended in the treatment of severe depression [18], however, the occurrence of psychotic symptoms in itself is neither a direct indication for shock treatment, nor a prognostic factor for the effectiveness of this type of therapy [19].

A crucial clinical problem, strongly marked in the described case, is the non-recognition of psychotic symptoms. Such a diagnostic mistake may be caused by difficult contact with the patient, often observed in patients with severe depression. As a result, it may lead to a reduction or discontinuation of antipsychotic therapy. In the described case, during the recurrence of illness preceding self-mutilation, the patient was consulted in an outpatient mental health clinic. However, as her lead doctor was absent at the time, the patient was consulted by another psychiatrist, not familiar with her detailed medical history or the characteristics of her episodes. Ab-

sence of crucial information made an accurate assessment of the patient's mental state nearly impossible. Psychosis was masked by dominant depressive symptoms. As a result, anti-depressive treatment was intensified while antipsychotic medication dose was significantly reduced.

There are numerous reports indicating a negative impact of rapid discontinuation or reduction of antipsychotic medication on patients' mental state (such as recurrence or intensification of psychotic symptoms) [20]. However, adequate diagnosis is complicated by the fact that only a few percent of patients share their self-mutilation intention with their relatives or mental health specialists [15].

Major depression, especially when accompanied by psychotic symptoms, is an exceptionally serious disease that can have dramatic consequences. It involves not only suicidal attempts, but also drastic acts of self-injury. Severe self-mutilation is a serious therapeutic problem for psychiatrists and surgeons alike, and close cooperation between those branches of medicine is required in this area. Therefore, from the point of view of daily psychiatric practice, a careful and precise diagnosis, and an adequate judgment of the patient's mental state at an early stage of the illness are crucial and may help avoid the most serious outcomes.

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