



## REVIEW PAPER

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# Auto-aggressive behavior in dental patients

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### ABSTRACT

Auto-aggression can be defined as all actions that aim to inflict mental or physical harm to oneself. It can be caused by a dysfunction of the self-preservation instinct, which can manifest in life-threatening self-mutilation tendencies. Auto-aggression can also be one of the symptoms of psychiatric or emotional dysfunctions such as borderline personality disorder, psychopathy or schizophrenia. Dental practitioners can recognize some abnormal lesions or changes of anatomical structures in the oral cavity which may show tendency to auto-aggressive behaviors manifesting in patient's mouth. On the other hand dental appointment being usually a source of great stress can also induce auto-aggressive behaviors.

**Keywords:** auto-aggression, behavior, dentistry.

A growing tendency for auto-destructive behavior has recently been observed among children and young adults who try (in this way) to relieve tension caused by often exaggerated parental expectations, an inability to adapt to school or conflicts in their peer groups [1].

Some researchers have noted that the tendency for self-mutilation can be linked to the level of a neurotransmitter called beta-endorphin [2, 3]. Beta-endorphin is an endogenous substance similar to opiates in the brain and self-mutilation may cause an increased production and/or release of this endorphins [4]. This in turn causes a person to experience effects similar to those caused by anesthesia and not feel pain. In addition, the release of beta-endorphins may induce a state that mimics euphoria. The occurrence of those processes has been confirmed by studies in which opioid receptor antagonists such as naltrexone and naloxone have been successfully used to minimize self-mutilation [4].

There are several types of auto-aggression: direct – where we can observe self-mutilation, physical abuse, self-incrimination, and indirect – where the subject forces, provokes and subjects to the aggression of others [5]. A condition concurrent to indirect auto-aggression has also been observed. It can be described as

a mentally conditioned tendency to suffer accidents, where the affected persons unconsciously cause life- and health-threatening situations, even seek out circumstances in which the risk of an accident occurring is high. Auto-aggression may also be defined as verbal – where it manifests in self-criticism or lowering ones self-esteem, and non-verbal i.e. self-mutilation, bodily harm [5, 6].

Self-mutilation can manifest in the form of inflicting superficial or deep cuts, plunging sharp objects into the body or swallowing them, dousing in acid, burning, breaking bones, damaging or cutting out fragments of flesh [1]. Those behaviors can be classified as apparent self-mutilation. But the term auto-destructive behavior also covers eating disorders (bulimia, anorexia, obesity), addictions, compulsive biting and picking of nails and cuticles, compulsive skin picking (scratching, reopening wounds, biting lips) and compulsive hair pulling and eating (from eyebrows, eyelashes and head). Feigning symptoms of a physiological or mental disease is typical in hidden auto-aggression [5, 7].

A tendency for self-mutilation is one of the most destructive behaviors of people of all ages that suffer from developmental disorders [3]. There are many possible reasons for those tendencies to occur – from bio-

chemical (lack of endorphins) to environmental (lack of attention). The theoretical and behavioral analyses of factitious injury support the hypothesis that the mutilating activities are learned and are related functionally or instrumentally to the presentation or withdrawal of various reinforcers such as affection or attention [6].

A visit to the dentist can have a dual outcome. It can be a factor that induces auto-destructive behavior due to a high level of psycho-emotional tension and stress usually accompanying such a visit, but on the other hand – a detailed dental examination can help discover early signs of self-mutilation of the masticatory system [2, 7]. Auto-destructive behavior within the oral cavity usually manifests in ulceration caused by chronic biting of the buccal and labial mucosa and tongue and in gingival recession, dehiscence or even auto-extraction of teeth [8].

When analyzing the type of lesions observed in the patient's oral cavity it is worth taking into account the criteria of diagnosing/suspecting lesions in the periodontium that point to auto-destruction as proposed by Stewart and Kernohan:

- lesions do not correspond with clinical picture of known periodontal diseases
- abnormal configuration of periodontal tissue with sharp borders/edges
- rarely observed location/arrangement of lesions
- lesions present in locations that are easily accessible to the patient
- pathological lesions are more likely to occur individually [6].

Some authors emphasize that diagnostic evaluation in case of observed self-mutilation of the oral cavity is a difficult task, as the concern and attention of the doctor and the family may strengthen the auto-destructive tendencies of the patient due to a strong need for attracting attention in people suffering from those disorders [7].

The therapeutic process should include behavior modification with a system of rewards for the renunciation of self-destructive behavior. After the successful modification of a patient's behavior, the restoration and maintenance of the tissues of the oral cavity can be achieved without any clinical difficulties [4, 8].

Situations in which a mental disorder may influence the clinical process in dentistry include: coercion of unnecessary dental procedures, self-mutilation of the oral cavity, abandonment of treatment of the oral cavity and development of conditions due to psychological degradation caused by mental disorders and damage to the viscerocranium caused by psychomotor agitation [7, 9].

An important group of patients at risk of auto-destructive behaviors are people suffering from psychotic disorders from the group of schizophrenic disorders i.e. schizophrenia, schizotypal disorders, persistent delusional disorders [3]. Those people are prone to experiencing delusions (i.e. false beliefs immune to persuasion) that they suffer from disorders of the oral cavity [8]. Sometimes these are accompanied by hallucinations of internal sensations, mostly in the form of pain, paresthesia or other somatic sensations located in the oral cavity. Such patients will consequently try to coerce unnecessary procedures or even self-mutilate [7].

Self-mutilation can also occur during relatively brief psychotic episodes, usually presenting during somatic disorders i.a. infectious or metabolic diseases, addiction to psychoactive substances, brain damage. In those patients, psychomotor agitation may cause, among others, fractures of the viscerocranium or knocked out teeth [3]. The cause can be agitation itself or the fact that the perception of the surroundings has been altered by the disease. Damage to the oral cavity can also occur during attempts at securing the patient. Some people with profound mental disorders are constantly agitated (described as erethism) [6]. They may suffer from numerous injuries and self-inflicted injuries such as damage to the viscerocranium due to frequent head banging [7, 9].

Cases of self-mutilation of the periodontium in autistic patients have also been observed [7]. It presented with persistent scratching and pressing the nail against the tissues of the periodontium which in turn caused stomatitis with post-inflammatory gingival enlargement and gingival recession. Autistic patients have also been observed to auto-extract their teeth, puncture their tongues due to chronic biting or suffer from gingival dehiscence [6, 9].

Rhombencephalosynapsis is a rare malformation of the cerebellum which has been observed to sometimes present with auto-extraction of teeth that were persistently and compulsively touched, pressed and loosened. Patients removed all their permanent teeth one by one in this manner [4].

HSAN (Hereditary Sensory and Autonomic Neuropathy) type IV is a rare disease in which the manifestation of the first symptoms in the oral cavity very often leads to a diagnosis [3]. A frequent problem which occurs at the stage of eruption of deciduous teeth is self-mutilation of the tongue and lower lip caused by that eruption. The source of auto-destructive behavior in HSAN Type IV patients is the congenital insensitivity to pain which causes a functional lack of response

to stimuli. Typical changes in the oral cavity of HSAN IV patients are ulcerations in the inferior surface of the tongue caused by the tongue touching the incisal edges of teeth during sucking or feeding [4]. Similar symptoms in the oral cavity can be observed in patients with Riga-Fede syndrome, here however the injuries are caused by natal or baby teeth characteristic of this disease. As the teeth erupt, the ulcerations of the tongue are joined by other symptoms i.e. biting of the lips and tongue [8]. Persistent and involuntary biting of the tongue is one of the most important diagnostic criteria of HSAN IV, causing the tissues to rip and bleed profusely, recurrent episodes of fever, infections and eating disorders. Children with this disorder have been observed to auto-extract teeth due to increased bruxism or as a reaction to the discomfort that accompanies the eruption of teeth [10, 11].

The behavior of young adults manifesting in increased tendency for drinking alcohol, attempting suicide, auto-aggressive behavior and instrumental aggression points to a serious and progressing problem with coping with the difficult situations experienced in life [12]. Adapting to the realities of life surpasses the possibilities of many young people. They turn to auto-destructive behaviors hurting themselves and the people around them [13, 14].

According to the Protection of Mental Health Act (art. 21 § 1), the examination of a person with a mental disorder without that persons consent can only be carried out if the person's behavior indicates that he or she may pose a direct threat to his or her life or the life and health of others or if that person is not able to fulfill his or her basic human needs [10].

Patients who coerce unnecessary dental procedures, who due to mental disorders refuse treatment or self-mutilate in a non-life-threatening manner cannot even be examined psychiatrically, not to mention treating them without their consent [13, 14]. Even after a psychiatric exam, patients who have been diagnosed with non-psychotic disorders (neurosis, eating disorders, personality disorders, some forms of depression) will be legally deemed fit to decide about their treatment even if their behavior is life-threatening [10, 12].

In light of the above, it is crucial for every doctor, including the dentist, to have basic knowledge in the field of psychiatry. Due to legal constraints, when the patient refuses a psychiatric consultation, the doctor must often rely solely on his or her knowledge.

If a patient attempts to coerce an unnecessary procedure, the doctor should refuse to perform it. Observations have shown however, that this is not always the case [10].

From a legal standpoint the cases of self-mutilation and neglect are slightly more complicated. In such cases one should assess if there is a real and direct threat to the life of the patient such as e.g. the possibility of a suppurative process spreading to the skull cavity. In such a case, according to the Protection of Mental Health Act, the patient shall undergo an involuntary psychiatric evaluation and if diagnosed with a mental disorder – an involuntary commitment. In urgent situations, in which the life of the patient is in immediate danger, action can be taken based on the Medical Profession Act – without analyzing the mental status of the patient [10].

People who suffer from mental disorders or intellectual disabilities and behave in an aggressive or agitated manner can be subjected to involuntary medical treatment [10].

Dental appointment, being usually a source of great stress, can induce certain auto-aggressive behaviors as a way to attract attention or relieve psycho-emotional tension, but it is also an invaluable diagnostic tool not only in regards to lesions that may manifest in the oral cavity but also for other aggression-related behaviors that may endanger the patient's health or life.

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