Adolescent Self-Mutilation
Diagnosis & Treatment

ABSTRACT
Self-mutilation is complicated and difficult to diagnose. Its incidence among adolescents has increased during the past 10 years. Most mental health professionals discover that the behavior has been part of patients’ lives long before their initial visit and that patients have become very good at hiding their behavior. The literature on self-mutilation is increasing, but newer statistics, specifically about cutting and picking behaviors, need to be assessed. The disorder often co-exists with another disorder that requires psychotropic medications, the administration of which should be managed by psychiatric clinicians who specialize in children and adolescents. A multidisciplinary team is necessary to achieve the best outcomes.

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Self-mutilation is categorized as an impulse-control disorder not otherwise specified in the Diagnostic and Statistical Manual for Mental Disorders, fourth edition, text revision (American Psychiatric Association, 2000), and is described as repeated skin picking, cutting, or bodily damage that is done in a compulsive manner (Sadock & Sadock, 2003). However, this disorder may not be considered by community members, health care providers, and school staff as a large problem. In a study of 2,000 schools and their 1,402 professionals, 75% responded that cutting behavior was seen as a small problem (Romer & McIntosh, 2005). In addition, self-mutilation is often overlooked due to its occurrence in many diverse settings, its being hidden or underreported by adolescents or parents, and its being underdiagnosed in health care settings (Derouin & Bravender, 2004).

INDIVIDUAL EXAMPLE
An adolescent, accompanied by her mother went to a community clinic for treatment of a cut on her forearm. The advanced practice nurse noted a laceration on the back of the patient’s left forearm that appeared to be several days old and measured approximately 5 cm. The adolescent reported that the injury occurred while she was walking near a vehicle and was cut as she brushed its side mirror. Although this explanation seemed feasible, the adolescent’s time line of the incident was not consistent with the appearance of the wound. She and her mother were asked why they did not go to the nearby emergency department for treatment. The mother explained that her daughter was prone to accidents and had been to the emergency department several times during the past 2 years for injuries. For this reason, she feared that the hospital employees would call child welfare services if her daughter returned.

As the examination continued, numerous linear scars were found on both of the adolescent’s arms. Concerned, the advanced practice nurse asked if the adolescent was engaging in self-mutilation by cutting. The adolescent quickly stated, “No, my younger sister does that.” The adolescent’s mother appeared agitated that this had been revealed. As the advanced practice nurse questioned them about the possibility of self-inflicted wounds, both the mother and daughter continued to deny any self-mutilating behavior. When questioned about the younger sister, they reported that the sibling had been admitted to a mental health facility for treatment after someone notified child welfare services about her noticeable arm wounds. The advanced practice nurse asked the mother whether her daughters or the family had ever received therapy and was told that only the patient’s younger sister had been treated and evaluated by mental health services. The advanced practice nurse asked whether they would like to be referred for evaluation by mental health services, but the mother refused and did not seem willing to discuss treatment.

With that, the advanced practice nurse made sure the adolescent’s tetanus shots were up to date, cleaned and dressed the wound, prescribed antibiotic medications, and gave the mother and daughter instructions on daily cleaning and dressing care. A follow-up appointment was scheduled for the next week.

THE NEXT STEP
This scenario is not uncommon in primary care and school clinic settings. Many concerns for this adolescent are uncovered when analyzing the example above, such as how health care providers can connect with adolescents and their parents. It seemed that the mother and daughter did not trust medical or school professionals, as the mother expressed a fear that they would again be reported to child welfare services. Without trust from both the parent and the adolescent, addressing this problem and preventing future complications will be difficult. If the problem is not addressed, the adolescent may fall through the cracks and receive no treatment for her self-mutilating behavior or for possible underlying disorders.

Family involvement is also needed, as another child was known to have self-mutilating behaviors. Other stressors in the family may be the catalyst for the self-mutilating behavior or even a cry for help or attention from the adolescent children. What could have been done to possibly help the patient and her family obtain access to psychiatric care? Perhaps the advanced practice nurse was hoping to address this at the next clinical visit, but if the daughter and mother do not arrive, what will be the next step?

LITERATURE REVIEW
Favaazza’s (1996) Body Under Siege helped to establish self-mutilation as a maladaptive form of self-help and relief from inner pain. It is categorized under the umbrella of deliberate self-harm or self-injurious behaviors, which encompasses self-mutilation, suicide, and parasuicide. Since the release of this often-quoted book, the literature regarding self-mutilating behavior in adolescence is beginning to increase; however, more studies are needed. A PubMed search using the terms self-mutilation and adolescent yield-
ed 193 articles published between 1990 and 2007. Articles pertaining to self-mutilation during psychosis or suicide intent and attempt or due to a medical disorder (e.g., Prader-Willi syndrome) were excluded, resulting in 79 remaining articles published in the past 17 years. This was further narrowed to the time frame of 2002-2007 and to include only articles about adolescents in the United States, leaving only 21 articles that met the criteria. Thus, more information about adolescents and self-mutilation is needed.

**INCREASING PROBLEM**

The incidence of self-mutilations among adolescents has increased during the past 10 years (Derouin & Bravender, 2004). Only a few studies on self-mutilation have been conducted in the United States, and results indicate that 4% to 38% of the samples engaged in self-injurious behaviors (Whitlock, Powers, & Eckenrode, 2006). Larger studies in Britain estimate that approximately 10% of youth ages 11 to 25 have self-injurious behaviors (Whitlock et al., 2006).

**VIRTUAL AWARENESS**

With easy access to the Internet, many adolescents are more computer savvy than their parents. They can now connect and communicate with people across the globe to develop friendships and share ideas and feelings. More than 80% of American youth ages 12 to 17 use the Internet, and nearly half of this population logs on daily (Lenhart, Madden, & Hitlin, 2005). Very little is known about self-injury in the adolescent population, and nothing is known about how this group uses the Internet to connect with others about their self-mutilating behavior (Whitlock et al., 2006).

Whitlock et al. (2006) implemented two studies to explore and document adolescent use of online message boards to share, solicit, and receive information and advice related to self-injurious behavior. In the first study, researchers examined posts dated 1998-2005 on more than 400 Internet message boards and found approximately 3,000 messages related to self-injurious behaviors. In the second study, researchers monitored Internet message boards from July 2004 to January 2005, finding 3,000 posts related to these behaviors. Overall, the studies revealed that the Internet was a powerful way for adolescents with self-injurious behaviors to come together. Although there are negative aspects to this kind of networking, hundreds of message boards specifically designed to provide a safe forum for individuals with self-injurious behaviors have come into existence during the past 5 years (Whitlock et al., 2006).

**CAUSES**

One of every five adolescents has a mental, behavioral, or emotional disorder (Derouin & Bravender, 2004). Other co-existing mental disorders and abuse may be underlying causes for self-mutilation. Favazza (2006) found that individuals who self-mutilate typically start during early adolescence, continue the behavior for 10 to 20 years, and may go on to develop eating disorders, kleptomania, or alcohol and substance abuse.

Zanarini et al. (2006) studied 290 inpatients who were diagnosed with borderline personality disorder. A total of 91% reported engaging in self-mutilation, 32.8% of whom began at age 12 or younger, 30.2% of whom began between ages 13 and 17, and 37% of whom began at age 18 or older (Zanarini et al., 2006). A study by Andover, Pepper, Ryabchenko, Orrico, and Gibb (2005) found that individuals who self-mutilate exhibited significantly more symptoms of depression and anxiety than did the control group, revealing a need to assess for this behavior, regardless of the diagnosis. Cyr, McDuff, Wright, Thériault, and Cinq-Mars (2005) studied 149 female adolescents with a history of sexual abuse. The researchers assessed the participants at admission and again at 9 months, finding that 62.1% had engaged in at least one self-mutilating behavior. Therefore, it is important that research on co-existing disorders be conducted and the proper assessment, therapy, and treatment for these disorders continue to be addressed.

Self-mutilation is often misunderstood. It differs from suicide gestures in that there is not intent to take one’s life or a preoccupation with death; rather, it is an act that is used to relieve an inner feeling of emotional pain, tension, or anxiety. Although there is no single diagnosis of self-mutilation, it is generally considered a symptom of multiple disorders, including depression, anxiety, substance use and abuse, eating disorders, adjustment disorders (Favazza, 2006; McDonald, 2006), psychosis, antisocial personality disorder, posttraumatic stress disorder, and mental retardation (Alan, 2006).

**RISK FACTORS**

Diagnosing self-mutilation involves not only looking for the above mental disorders but also looking at other risk factors and family dynamics. Risk factors include being an adolescent, being female, or having a history of sexual, physical, or emotional abuse as an adolescent (Alan, 2006). Children who live in homes where they witness violence or other kinds of abuse toward other
individuals are also at risk (Alan, 2006). Individuals who are incarcerated also face a greater risk (Alan, 2006); therefore, adolescents within the juvenile corrections system should be assessed frequently. Emotional behaviors such as moodiness, poor self-esteem, poor impulse control, sadness or tearfulness, anger, anxiety, disappointment in oneself, and an inability to identify positive aspects of one’s life can also be risk factors for adolescents (Derouin & Bravender, 2004). Other indicators include adolescents continually dressing in long sleeves and pants—even in the warm months—or refusing to undress or take part in activities that require changing in front of other people (Derouin & Bravender, 2004).

POSSIBLE GENETIC LINK

Previous studies have indicated that there may be a possible genetic link to self-mutilation. Iglauer et al. (as cited in Joyce et al., 2006) observed self-mutilation in laboratory animals, implying that such behavior in animals is associated with genetic predisposition. Self-mutilation in human beings may be similar. Although self-mutilating behaviors such as cutting are commonly recognized as self-harming, more subtle forms of self-mutilation, such as biting the lips or fingers, may not be recognized as frequently or commonly as a form of self-harm. After obtaining DNA from patients’ blood samples, Joyce et al. (2006) reported a significant correlation between the presence of the T allele of G-protein β3 (GNβ3) and self-mutilation in patients with depression. The presence of GNβ3 alone without other risk factors was independently predictive of self-mutilation. However, the presence of GNβ3 combined with childhood sexual abuse or borderline personality disorder significantly increased the risk of self-mutilation. The authors also found that the risk of self-mutilation was highest in patients ages 18 to 24 with depression.

ASSESSMENT

Initial assessments for self-mutilation should include complete skin assessments for cuts and scars that could have been inflicted by sharp objects, picking, or burning. A recommended screening tool for at-risk adolescents is included within the Guidelines for Adolescent Preventive Services (GAPS), provided by the American Medical Association (AMA) (2004), and takes 10 to 15 minutes to complete. Although this tool does not specifically address self-mutilation, it does address risk factors such as eating disorders, substance use, abuse, depression, and suicide. Its questions regarding medical history and health status make the assessment for risk factors more acceptable for adolescents in the general medical setting. The tool, available online at http://www.ama-assn.org/ama/pub/category/1980.html, can be completed by adolescents; however, it is best if health care providers administer it with adolescents to help engage conversation and build trust. Therefore, in reference to the individual example at the beginning of this article, the plan at the adolescent’s next appointment would be to administer the GAPS tool and discuss the findings with both her and her mother.

TREATMENT

Trust and Confidentiality

After the assessment, a discussion about the kinds of treatment and the probability of success with therapy can begin. Although self-mutilation requires a lengthy healing process and is difficult to treat, success can be achieved by using a multidisciplinary treatment approach. Trust is the most important aspect in reaching treatment success, and achieving trust is the responsibility of health care providers. They should not blame the patients—or the parents—for the behavior, as doing so may prevent trust and compliance with therapy. In addition, it is imperative that health care providers maintain congruent behaviors; they must demonstrate genuineness and empathy, positive regard, and consistency in their approach to this population. Health care providers should offer acknowledgement of the adolescents’ emotional pain and help with alleviating problems. They should discuss confidentiality as it applies to adolescents, explaining that the encounter is confidential and will not be discussed outside of the visit or with family members, friends, or health care providers who are not part of the treatment team. Only in extreme situations of intention to hurt others or self, or if the patient is not compliant with treatment, would health care providers be required to inform someone outside of the treatment team.

Treatment Teams

Because treatment is a lengthy process, health care providers must be patient with the adolescents and give them encouragement as much as possible. It is important to have a multidisciplinary team providing care for adolescents who self-mutilate. Such a team should be coordinated by a psychiatric provider, such as a psychiatric nurse practitioner or psychiatrist, who has experience with children and adolescents. Other members should include their school counselor, school nurse, psychologist, and therapist. At some point, it may be necessary to involve child
welfare services if the adolescent or his or her parents are noncompliant. Such a team can provide its own expertise for working with co-existing disorders and symptoms and stressors that lead to self-mutilating behavior.

**Therapy**

Patients who self-mutilate describe a sense of depersonalization prior to the act and a relief of anxiety, tension, or inner pain after the act. Therefore, it is important for adolescents to decrease environmental stress, increase connectedness to parents and social circles, improve communication skills, develop effective measures of self-soothing, and improve mood and emotional regulation (Derouin & Bravender, 2004). Therapies for individuals who self-mutilate include individual, family, group, and music therapy, as well as assertiveness and communication skills training (Derouin & Bravender, 2004). It is important to consult expert therapists to help with these aspects of care. Medications are often used in conjunction with the listed therapies and are managed by a psychiatric nurse practitioner or psychiatrist. For example, if a patient experiences anxiety as a result of depression, the depression should be treated with first-line medications in addition to the previously listed therapies.

Treatment requires that home, school, or peer stressors be identified and addressed. Adolescents who self-mutilate require help with communication skills to express their needs and feelings. Dietary changes should include the reduction or elimination of caffeine products, which can increase anxiety; patients should also avoid drugs and substances that increase impulsive behaviors (Derouin & Bravender, 2004).

**Hospitalization**

Finally, health care providers must be aware of the need for hospitalization for adolescents who pose a safety risk. Adolescents who have deep wounds, express feelings of suicide, or exhibit psychotic behavior require hospitalization. Hospitalization is also a requirement if there is a lack of parental involvement or supervision (Derouin & Bravender, 2004).

**CONCLUSION**

There is still much to learn about self-mutilating behavior. Information on the current prevalence and successful treatments is limited. However, when health care providers form trusting, therapeutic relationships with patients and parents, treatment can help. Health care providers must be prepared for the lengthy treatment process and collaborate with all available resources to achieve such success.

**REFERENCES**


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