

# SELF-EMBEDDING BEHAVIOR (SEB): A CASE REPORT AND REVIEW OF LITERATURE

Junaid Latif Chaudhry<sup>1</sup>, Abdul Wahab Yousafzai<sup>2</sup>✉

1: Intern, Department of Psychiatry, Shifa International Hospital, Islamabad, Pakistan

2✉: Department of Psychiatry, Shifa International Hospital, Islamabad, Pakistan

Email: [wahab.yousafzai@gmail.com](mailto:wahab.yousafzai@gmail.com)

**Date Submitted:** December 05, 2015

**Date Last Revised:**

**Date Accepted:**

**This article may be cited as:** Chaudhry JL, Yousafzai AW. Self-embedding behavior (seb): a case report and review of literature. Khyber Med Univ J 2016;8(1):pp.

## AUTHOR'S CONTRIBUTION

All authors have made substantial contributions to the manuscript

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

## ABSTRACT

Self-embedding behavior (SEB) is a type of self-injury in which individuals insert foreign objects into their soft tissues (e.g. into the muscle or under the skin). This report is a case of self-embedding behavior (SEB) with multiple self-inserted pins and needles in the extremities in a young female suffering from major depressive disorder. Information for this case was compiled from psychiatric and psychotherapy interviews, clinical observations, and medical and surgical notes. The patient engaged in self-embedding behavior most likely to deal with the pain and suffering she had been experiencing due to low self-esteem issues. Although there is scant literature published on this topic, the available literature indicates that self-embedding behavior in adolescents occurs primarily in females of 14-18 years who have bipolar disorder, post-traumatic stress disorder, or depression. The diagnosis of SEB is challenging, and once a diagnosis is made, the decision to remove the embedded objects depends on the location of the object. Management of SEB involves treating the underlying psychiatric disorder, which was done quite successfully in the case of Miss K.

**KEYWORDS:** Self Embedding Behavior, Self Injury, Depression.

## INTRODUCTION

In self-injury, individuals directly and deliberately destroy their own body tissue<sup>1</sup>. They may do so with or without suicidal intention<sup>1</sup>. Self-injury includes cutting, burning, carving, hair pulling, inserting objects in body orifices, skin picking, and scratching<sup>2-4</sup>. In self-embedding behavior (SEB), individuals insert foreign objects into their soft tissues such as their muscles or under

their skin<sup>5</sup>. There is little international published research on SEB, and no previous case has been reported in our setting. This case study of an adolescent who engaged in SEB expands our knowledge of patients who engage in SEB, thereby allowing health professionals to more accurately diagnose and treat these individuals.

## **METHODS**

The information for this case study was compiled using data from psychiatric and psychological interviews, clinical observations, and medical and surgical notes. No psychometric assessments were done. The patient was diagnosed as having major depressive disorder as per the DSM-V criteria for this disorder.

## **CASE REPORT**

Miss K is a 14-year-old single female student of class 9. She presented to the psychiatry clinic, accompanied by her mother, with 10-weeks history of self-embedding behavior (SEB). She was referred by a surgeon after she had undergone surgical removal of a needle in her left upper arm.

History revealed that Miss K had been presenting to the surgery department of a local hospital on several occasions with pain and local indurations of her lower and upper limbs. Miss K was misdiagnosed during her first two SEB episodes. The first radiological examination (x-ray) of a pin in her right upper arm was mistaken as part of her clothing (See Figures 1 and 2). Following a second radiological examination of the same right upper arm, the doctor misdiagnosed her with an infection. Following the first and second SEB episodes, in which the patient embedded pins in her left upper arm and right upper arm, respectively, surgery was done to remove the embedded pins. Despite surgical removal of most of the pins, the treating physicians still did not suspect self-embedding behavior. After the third SEB episode, in which the patient embedded a staple in her right upper arm, the doctor did not do surgery to remove the staple because he said the staple would not be easy to remove and the presence of the staple would not be harmful in the long term. A few days after this consultation, the patient removed a part of the staple manually. It was during the fifth SEB episode (needles inserted in lower left leg) that the patient was referred to the psychiatric clinic by the emergency doctor. As for past history was concerned there was no history suggestive of substance abuse or childhood abuse.

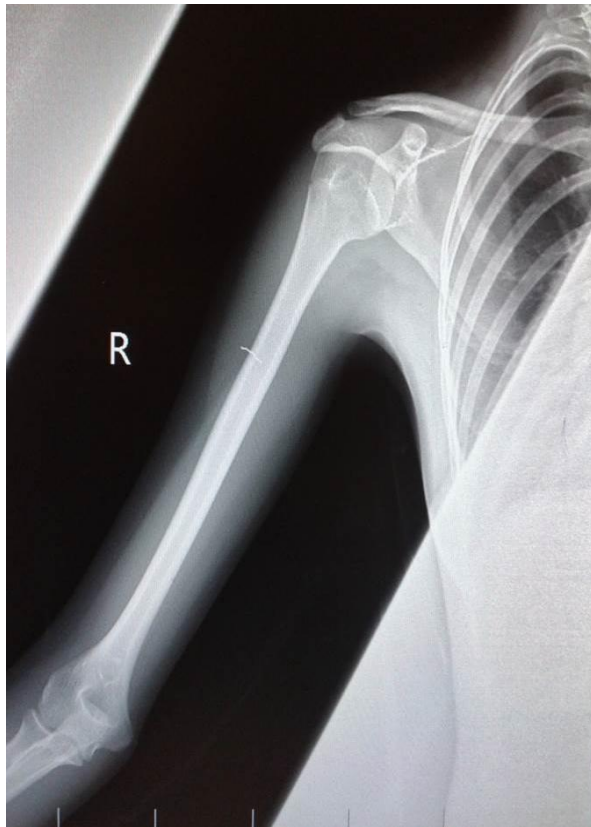
On mental status examination the patient had no psychotic symptoms, and no suicidal ideation.

Physical examination showed scar marks on the upper limbs left from the surgical removal of the pins/needles that had been embedded previously.

Miss K did not tell her mother about her behavior. She would only complain about pain or irritation at the site of insertion. In addition, she usually waited a few days after the SEB episodes before informing her mother about the “pain”.

When confronted by mental health professionals, Miss K denied deliberately inserting the pins into her body. She explained one incident by saying that while walking at home she tripped and

fell on the floor, and a pin that was on the ground embedded itself in her leg. On the other hand, her mother attributed the presence of the pins to supernatural forces (jinn).



**FIGURE I: RIGHT ARM X-RAY  
DONE ON 22/9/14**



**FIGURE II: RIGHT ARM X-RAY DONE  
ON 22/9/14 (MAGNIFIED)**

## **DISCUSSION AND REVIEW OF LITERATURE**

There are certain features that are consistent among adolescents who engage in SEB. For instance, the age range during which adolescents engage in SEB is 14 to 18 years,<sup>5,6</sup> which is consistent with Miss K's behavior, since she engaged in SEB at 14 years of age. In addition, just as most adolescents with SEB were females (10 of 12)<sup>5,6</sup>, our patient is also female. The average number of SEB episodes in adolescents is 1.9<sup>5</sup>; Miss K engaged in 5 SEB episodes before presentation to the psychiatry clinic. The average period between episodes for our patient was 20 days (49, 6, 17, and 7 days between episodes, respectively), which is about three times as frequent as the average period of 63 days between episodes for adolescents<sup>5</sup>. We hypothesize that this points to the severity of Miss K's depression. Just as Miss K did not tell her mother about her self-embedding behavior, there have been similar cases where individuals have hidden their self-embedding behaviors from others. One individual did not share knowledge of their SEB with anyone else<sup>7</sup>. Another individual engaged in SEB for two years and their family was unaware of their behavior<sup>8</sup>. In almost all cases of SEB, patients have a history of comorbid psychiatric disorders. The most common disorder is bipolar disorder, followed by post-traumatic stress disorder and then depression<sup>5</sup>. Of 12 adolescents who engaged in SEB, only 1 did not

have a diagnosis of bipolar disorder. (The one had major depression<sup>5,6</sup>.) Miss K was unique in that although she is an adolescent, she did not have bipolar disorder or post-traumatic stress disorder, as might be expected; she was only diagnosed with depression.

Miss K did not admit engaging in SEB. In our literature search, one individual was unable to explain why they engaged in SEB<sup>9</sup>. Miss K's explanation is very similar to that of another patient who claimed that a needle got inside her body accidentally<sup>10</sup>. Individuals may engage in SEB to commit suicide<sup>1</sup>. Three patients with SEB tried to commit suicide by inserting needles into their chest<sup>6,11</sup>. One female attempted suicide by inserting a sewing needle into her breast<sup>7</sup>. Miss K did not engage in SEB with suicidal intention. Some individuals try to remove the self-embedded objects from their body after some time. One patient would scratch and dig into their arm to try to remove embedded staples<sup>9</sup>. Another individual with SEB pulled out some of the needles they had self-embedded<sup>8</sup>. Similarly, Miss K was able to remove a part of a staple that she had embedded in her right upper arm.

It is challenging to diagnose SEB because it is not common and there are few specific clinical findings to follow. In one SEB patient, doctors were unable to make the correct diagnosis until the third appointment<sup>12</sup>. Similarly, in the case of Miss K, the doctors did not make the correct diagnosis when she presented following her first two SEB episodes. The inaccurate diagnoses indicate that physicians are not aware of SEB. Doctors have made recommendations to diagnose, manage, and treat SEB patients. Because it is challenging to diagnose SEB, doctors recommend taking a comprehensive history<sup>6</sup>. If the doctors had taken a thorough history of Miss K following her first two SEB episodes, perhaps she would not have been misdiagnosed, and with appropriate treatment, perhaps future SEB episodes would have been prevented. The decision to remove the embedded object depends on the location of the object. If the foreign body is located inside the heart or great vessels, it should be removed<sup>11</sup>. However, if the foreign body is inserted in a location where there is no inflammation or neural/vascular impairment, doctors may not need to intervene<sup>8</sup>. In Miss K's case, since all embedded objects were in the limbs, the recommendation would have been to leave the pins inside the body. However, perhaps because doctors were not aware of these recommendations, the doctors surgically removed three of the five pins. Finally, the recommended management for SEB is to treat the underlying psychiatric problem<sup>13</sup>. Accordingly, once the diagnosis of SEB was finally made, Miss K was treated by a psychiatrist for her depression, and she was also referred to a psychologist for counseling to identify underlying issues that may have contributed to her behavior.

One of the causes of SEB in Miss K's case was low self-esteem, which led to depression. During the course of several sessions with mental health professionals, Miss K revealed that she had several brothers who teased her relentlessly about her appearance, despite her mother's pleas to stop the teasing. (Perhaps her brothers were less disciplined because their father mostly lived away from home for work purposes.) Although many adolescents who engage in SEB previously experienced past trauma, Miss K denied any such experiences, sexual, physical, or otherwise. Of course, it is possible that Miss K had experienced trauma but was not comfortable sharing this information. Miss K did not share her SEB with others, including with her mother, for fear of embarrassment or shame. Miss K was already sensitive because her brothers would make fun of her. Since SEB is almost always associated with some mental illness, admitting to

engaging in SEB is akin to admitting to having a mental illness, which many individuals are not comfortable doing.

Miss K was diagnosed with major depressive disorder and was prescribed antidepressant medication and was recommended weekly psychotherapy sessions. She followed up with her psychiatrist regularly for three months. Miss K was compliant with her anti-depressant medication. After a few weeks of starting her medication, she showed significant improvement in her symptoms. In addition, Miss K attended her psychotherapy sessions regularly and completed her homework assignments willingly. Her homework assignments included self-expressions such as journaling and drawing. Miss K did not engage in further self-embedding behaviors, and her depression improved significantly. She gradually opened up to her older sister, who lived in England, for support with her depression. We believe that Miss K improved significantly because she was compliant with her medication, which effectively addressed many of her physical and mood symptoms. In addition, she was actively engaged in her psychotherapy sessions and was intrinsically motivated to get better.

## **CONCLUSION**

To our knowledge, there is little published literature on adolescents who engage in self-embedding behavior (SEB). This lack of awareness has most likely resulted in the misdiagnosis of SEB. Although researchers have identified typical features of SEB in terms of age of onset, number of episodes, and so on, the limited number of studies offers a limited sample size, which limits extrapolation of data to new cases. In addition, patients may not conform to the features identified by these studies which include only a few patients. Therefore, we suggest further research on larger adolescent sample sizes. Such knowledge will allow for improved diagnosis and therefore proper treatment for adolescents suffering from this very unfortunate condition.

## **REFERENCES**

1. Nock MK. Why Do People Hurt Themselves? New Insights Into the Nature and Functions of Self-Injury. *Curr Dir Psychol Sci*. 2009;18(2):78-83.
2. Hicks KM, Hinck SM. Concept analysis of self-mutilation. *J Adv Nurs*. 2008;64(4):408-413.
3. Falagas ME, Christopoulou M, Rosmarakis ES, Vlastou C. Munchausen's syndrome presenting as severe panniculitis. *Int J Clin Pract*. 2004;58(7):720-722.
4. McDonald C. Self-mutilation in adolescents. *J Sch Nurs Off Publ Natl Assoc Sch Nurses*. 2006;22(4):193-200.
5. Bennett GH, Shiels WE, Young AS, Lofthouse N, Mihalov L. Self-Embedding Behavior: A New Primary Care Challenge. *Pediatrics*. 2011;127(6):e1386-e1391.
6. Sersar SI. A self-introduced sharp metallic foreign body migrating transcutaneously to the interventricular septum, mistaken as an inhaled pin. *J Thorac Cardiovasc Surg*. 2011;141(2):603-604.
7. Karapolat S. A needle in the breast: a case report. *J Med Case Reports*. 2009;3:7419. doi:10.4076/1752-1947-3-7419.

8. Sarkar S, Balhara YPS. Needles in Legs: A Response to Command Hallucinations. *J Neuropsychiatry Clin Neurosci*. 2012;24(2):E10-E12. doi:10.1176/appi.neuropsych.11050111.
9. Klein CA. Intentional Ingestion and Insertion of Foreign Objects: A Forensic Perspective. *J Am Acad Psychiatry Law Online*. 2012;40(1):119-126.
10. Mick SL, Abdullah I, Tchantchaleishvili V, et al. Sewing needles embedded in the cardiac interventricular septum and chest wall. *J Thorac Cardiovasc Surg*. 2010;140(3):709-710. doi:10.1016/j.jtcvs.2010.07.042.
11. Schechter DC, Gilbert L. Injuries of the heart and great vessels due to pins and needles. *Thorax*. 1969;24(2):246-253.
12. Solbach C, Diebold T, Louwen F, Kaufmann M. [Case report -- needle in the breast]. *Zentralblatt Für Gynäkol*. 2006;128(4):229-231. doi:10.1055/s-2006-933487.
13. Wraight WM, Belcher HJCR, Critchley HD. Deliberate self-harm by insertion of foreign bodies into the forearm. *J Plast Reconstr Aesthet Surg*. 2008;61(6):700-703. doi:10.1016/j.bjps.2007.04.004.

**CONFLICT OF INTEREST**

Authors declare no conflict of interest

**GRANT SUPPORT AND FINANCIAL DISCLOSURE**

NIL

KMUJ web address: [www.kmuj.kmu.edu.pk](http://www.kmuj.kmu.edu.pk)

Email address: [kmuj@kmu.edu.pk](mailto:kmuj@kmu.edu.pk)