

## Vampiristic behaviors in a patient with traumatic brain injury induced disinhibition

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### Abstract

Vampiristic behaviors are rarely seen clinically and less than 100 cases have been reported in the world literature to date. A distinction is usually made as to whether the patient drinks their own blood or the blood of others. We describe a 38-year-old patient who had vampiristic thoughts and fantasies that began in adolescence, but did not act on these thoughts until after she suffered a traumatic brain injury with a three-week loss of consciousness while serving in the military. Brain imaging showed focal damage to her bilateral frontal lobes. Psychological testing demonstrated impairment of executive function. We review the proposed diagnostic criteria for vampirism and discuss how behavioral disinhibition may have affected the emergence into behavior of her previously inhibited vampiristic thoughts.

**Key words:** Vampirism; Disinhibition; Traumatic brain injury; Hematophagia; Blood

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**Core tip:** The chronic neuropsychiatric sequelae of

traumatic brain injury (TBI) is currently the subject of serious clinical investigation. This case presents a clinical association between TBI and vampiristic behaviors already present as pre-brain injury fantasies, which became manifest as post-brain injury behavioral disinhibition.

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## INTRODUCTION

A review of the scientific literature finds that since the late 19<sup>th</sup> Century clinicians have identified fewer than 70 patients with clinically significant vampiristic behaviors. Clinical vampirism is so uncommon that no consensus exists in the literature defining the term. Bourguignon broadly defined clinical vampirism to include any violent or sexual act performed on a dead or dying person, including necrophilia, cannibalism and necrosadism<sup>[1]</sup>. Hemphill *et al*<sup>[2]</sup> felt that vampirism is a rare compulsive disorder with an irresistible urge to ingest blood, which was a necessary ritual to bring mental relief. They defined vampirism only to include a blood taking compulsion, an abnormal interest in death, and a poorly formed identity<sup>[2]</sup>. They called this the "triad of vampirism". Vandenberg *et al*<sup>[3]</sup> defined vampirism as "the act of drawing blood from an object" (usually a love object), and receiving resultant sexual excitement and pleasure. They felt that sucking or drinking of blood was "an important part of the act, but not an essential one"<sup>[3]</sup>. There has also been a report of a "psychic vampire" who consumes the energy of others rather than their blood or other bodily fluids<sup>[4]</sup>.

In 1984, Prins<sup>[5]</sup> suggested a classification system of clinical vampirism with four primary categories: (1) complete vampirism (which includes necrophilia, necrosadism and ingestion of blood); (2) vampirism without ingestion of blood or consumption of dead flesh (essentially necrosadism and necrophilia); (3) vampirism without death (ingestion of blood from another living person); and (4) auto-vampirism (in which the individual derives satisfaction from ingesting his or her own blood)<sup>[5]</sup>. Prins further subdivides auto-vampirism into three subcategories: (1) self-induced bleeding with ingestion of blood; (2) voluntary bleeding with re-ingestion of blood; and (3) autohaemofetishism in which pleasure is derived from the sight of blood drawn up in a syringe during intravenous drug abuse<sup>[6]</sup>.

Vampirism presenting as a single clinical entity is a "most rare phenomenon"<sup>[6]</sup>. When a patient is found to display vampiristic behaviors, they are commonly associated with other clinical conditions<sup>[5]</sup>. According to Prins in 1984 the most common psychiatric conditions associated with clinical vampirism were "schizophreniform",

"hysteria", severe psychopathic disorder, and mental retardation<sup>[5]</sup>. Vampirism is "not infrequently seen in association with serious sexual offending where biting and the ingestion of blood may be a fairly common phenomenon"<sup>[5]</sup>. A number of case reports of vampirism are associated with psychotic illness<sup>[3,4,7-9]</sup>.

Sakarya *et al*<sup>[10]</sup> identified a case of vampirism associated with dissociative identity disorder and post-traumatic stress disorder. Jaffé *et al*<sup>[8]</sup> recognized an association between vampirism and antisocial personality disorder (APD). They found that in cases where vampirism existed with APD, the patient was often noted to have a history of childhood impulse control disorders, animal harm, a lack of empathy towards others, and an early tendency to break rules and limits<sup>[8]</sup>. They also noted that when comparing psychopathic individuals who display vampiristic behaviors with schizophrenic patients who have similar symptoms, the psychopaths are more organized and have better reality testing than schizophrenics<sup>[8]</sup>. It has also been noted that taking blood from others seems to be done more frequently by males than females<sup>[2]</sup>. It has been suggested that psychiatric patients with recurrent episodes of anemia should be evaluated for autovampirism<sup>[11]</sup>.

## CASE REPORT

The patient was a 38-year-old biological male who presented to an urban Emergency Department for evaluation of a self-inflicted laceration of their left forearm. Upon evaluation the patient was neatly groomed wearing female attire. She was easily engaged and displayed a bright affect with no gross cognitive deficits and no overt psychotic symptomatology. The patient admitted intentionally lacerating her forearm, but vehemently denied that she had any intent to harm herself. Rather, she stated that her intention was to "fulfill a thirst for blood and flesh". She stated that when she needed to satisfy her desire for blood, she usually would chew the inside of her mouth until it bled. However, during times of emotional distress this practice was insufficient to satisfy her.

On this occasion the patient had lacerated her left forearm with a hobby knife and then "chewed the fat deposits, gnawed on it for a while and sucked it to try and get as much blood as possible". She described the action as well planned and deliberate. She denied ever involving an animal or another human in the satisfaction of her "thirst". As there was no indication that her self-injurious behavior was the result of a mood, anxiety, psychotic or impulse-control disorder the patient was educated on the risk of infection and referred for an outpatient psychiatric evaluation.

At her outpatient evaluation, a review of her history revealed she sustained a traumatic brain injury (TBI) with a 3-wk loss of consciousness at age 23 while serving in the military. Four years after her TBI she was medically discharged from the armed services due to fibromyalgia and a chronic musculoskeletal pain syndrome. She reported that she was later diagnosed with gender

identity disorder at age 31. At that time, she also divulged that she had long had a craving to drink blood that dated back to adolescence. She noted having a keen interest in vampires, more specifically the television series "True Blood", the "Twilight Saga" films and the "Vampire Chronicles" series of novels by Anne Rice. The patient reported that she began chewing the inside of her mouth to ingest blood after sustaining the TBI at age 23 while serving in the military. She reported that the self-laceration beginning after her discharge from the military at age 27. She noted that her desire for blood progressively increased from age 23 to approximately age 33 when it reached its current level.

During her outpatient treatment, a computed tomography (CT) scan of her head was performed. The scan revealed extra-axial cerebrospinal fluid bilaterally over her frontal lobes indicating a focal loss of cortical volume. There were no prior CT results available with which to compare. A follow-up magnetic resonance imaging (MRI) of the head confirmed the focal loss of cortical volume but yielded no pertinent additional findings.

Psychological testing was obtained (including the Minnesota Multiphasic Personality Inventory-2 and Coping Skills Questionnaire Catastrophizing). Results of the testing indicated average cognitive function with a tendency for executive functions to deteriorate when the patient was placed under emotional stress or faced with multiple tasks. This was believed to be associated with the bilateral, focal cortical volume loss seen on head CT and MRI. Testing also revealed an inability to define herself except in relation to external objects. The patient reported that she felt much happier during her nine-year military career because she enjoyed the structured lifestyle and often felt overwhelmed by the responsibilities and independent decision-making required in civilian life.

The patient was fairly consistent in her outpatient mental health follow-up. Over the next several months she came to the realization that she would not be able to afford sex-reassignment surgery (SRS). This resulted in another significant psychological theme emerging during her outpatient treatment: A desire to castrate herself by severing her penis as a way of forcing a surgeon to complete the SRS. As the patient realized that SRS requires an intact penis for reconstruction, this desire waned but she continued to fantasize about auto-castration or "bursting" one of her testes.

In the two years since her initial presentation in the emergency department the patient remains under-employed and functions semi-independently with the support of her parents. She leads an active social life as a woman. Her autovampiristic behaviors continue although they are now a less prominent feature of her clinical presentation as she regularly minimizes them when interacting with her providers.

## DISCUSSION

Looking at Prins' classifications, this patient seems to fit neatly into the autovampirism category, with the

sub-category of deliberately-induced self-bleeding with ingestion of blood<sup>[5]</sup>. Although the patient acknowledged the presence of autovampiristic thoughts as an adolescent, she never acted upon them until after her TBI and her discharge from the military. She also fits Hemphill and Zabow's triad of vampirism<sup>[2]</sup> with her blood taking compulsion, her interest in death (and the undead), and her poorly formed identity (which was supported by the psychological testing). After reviewing the patient's history, consideration was given to the idea that the patient's TBI and focal loss of frontocortical volume might be a significant contributor to her clinical presentation. It is possible that the TBI may have disinhibited the patient and made it more likely that she would act on her vampiristic desires.

Disinhibition is defined as "a greater freedom to act in accordance with inner drives or feelings and with less regard for restraints dictated by cultural norms or one's superego<sup>[12]</sup>". This often leads to behaviors that would not usually be displayed under regular life conditions. Psychiatrists and neurologists frequently care for patients with illnesses that present with behavioral disinhibition. These include frontotemporal dementia, vascular dementia, neurosyphilis, and Wilson's Disease<sup>[13]</sup>. Patients with a recent TBI can display behavioral disinhibition as well<sup>[14]</sup>. Behavioral disinhibition can be associated with the use of alcohol, sedative/hypnotics, and benzodiazepines<sup>[13,15,16]</sup>. In a review of factors contributing to TBI outcome, Ponsford noted that pre-treatment psychiatric status and coping style helped determine post-TBI outcome<sup>[17]</sup>. Patients with pre-injury psychiatric history should be provided psychological therapy to alter their behaviors<sup>[17]</sup>. Perhaps if our patient could have been engaged in therapy shortly after suffering her TBI, she could have developed coping strategies less problematic than drinking her own blood.

In conclusion, our patient developed autovampiristic behaviors after sustaining a TBI while serving in the military. She had a long history of pre-injury vampiristic thoughts and interests, but never acted on these thoughts until after sustaining a TBI. It is possible that the TBI decreased our patient's inhibitions regarding the vampiristic actions, allowing her to initiate these behaviors. While TBI has not previously been associated with vampirism, it has been associated with disinhibition<sup>[14]</sup>. As TBIs are becoming increasingly common worldwide, it is possible that we will see an increase in behavioral disinhibition in those patients who have had such an injury. This underlines the importance of spending time with our patients who have suffered a TBI to discover and better understand the behavioral changes associated with their injury and initiate needed treatments as early as possible.

## COMMENTS

### Case characteristics

A 38-year-old male with a history of traumatic brain injury (TBI) presented with a self-inflicted laceration of their left forearm.

### Clinical diagnosis

Deliberate laceration of left forearm, self-inflicted with no suicidal intent.

### Differential diagnosis

Frontotemporal dementia, neurosyphilis, disinhibition syndrome, borderline personality disorder, schizophrenia or substance intoxication.

### Laboratory diagnosis

All labs were within normal limits.

### Imaging diagnosis

Computed tomography showed extra-axial cerebrospinal fluid bilaterally over frontal lobes indicating a focal loss of cortical volume.

### Pathological diagnosis

Autovampirism secondary to TBI induced disinhibition.

### Treatment

Cognitive behavioral therapy.

### Related reports

Since the 19<sup>th</sup> Century clinicians have identified fewer than 70 patients with clinically significant vampiristic behaviors. Documented etiologies have included primary psychotic disorders, dissociative identity disorder, mental retardation and antisocial personality disorder but never before TBI.

### Term explanation

Autovampirism is the deliberate ingestion of one's own blood.

### Experiences and lessons

Previously occult psychopathology may intensify and manifest as behaviors after being unmasked by TBI induced disinhibition.

### Peer-review

It is a well written case report concerning a 38-year-old patient who had vampiristic thoughts and fantasies that began in adolescence and represented the typical act after she suffered a traumatic brain injury with a three-week loss of consciousness while serving in the military. The authors have also reviewed and discussed the proposed diagnostic criteria for vampirism. The paper will be helpful for the readers and should be published.

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