Case Report

A Case Report of Dissociative Amnesia Involving "Detective Work"

Muhammad Sharifi, MD,¹ Ana Turner, MD,² Traci Fuglestad,³ Colleen Bell, MD, FACHE, FAPA^{1,3}

Abstract

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Dissociative amnesia is a rare psychiatric disorder presenting with sudden retrograde memory impairment and inability to recall autobiographical information that is inconsistent with normal forgetting. This case report discusses dissociative amnesia with dissociative fugue in a middle aged male that led to him becoming homeless. Because of his autobiographical forgetting, he was unable to access services, and we present here the distinctive "detective work" needed to not only help treat his symptoms, but also help him legally establish who he is and gain access to housing. This patient is unique in that he only began psychiatric treatment in his late 40s. His diagnostic picture is complicated due to a history of autism spectrum disorder, emotional trauma and memory impairment with difficulty recalling autobiographical memory. There is a temporal relationship between multiple traumatic events and his subsequent dissociation and amnesia, which could have unconsciously protected him from more stress and stabilized his symptoms of depression and anxiety. Author affiliations are listed at the end of this article.

Correspondence to: Muhammad Sharifi, MD Orange Park Medical Center 2001 Kingsley Ave Orange Park, FL 32073 (muhammad.sharifi@hcahealthcare.com)

Keywords

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Introduction

Dissociative amnesia is a type of dissociative disorder characterized by an inability to recall autobiographical information that is inconsistent with normal forgetting, which may involve purposeful travel or bewildered wandering (fugue). The exact mechanism is unknown but it can be preceded by stressful or traumatic events and the degree of impairment can range from mild to severe.¹ Prevalence studies, though scarce, have shown rates between 0.2% and 7.3%.²

Patients usually present with retrograde memory loss and inability to recall important autobiographical information, while there is no problem forming new memories. Memory impairment in dissociative amnesia is not associated with any organic pathology. The memory loss varies from a few minutes to entire memories related to identity, life, family or work. Often people are not aware of their amnesia. They lead their life by adopting a new name until somehow their true identity is revealed to them. Dissociative amnesia with fugue can last for hours to months.³

The socioeconomic burden of dissociative amnesia has not been formally assessed, but case series indicate long-lasting disability in many patients, with substantial functional impairment.⁴ Clinicians should try to restore patients' lost memories to consciousness as soon as possible. Treatment may include cognitive therapy, hypnosis or group psychotherapies. No known pharmacotherapy exists for dissociative amnesia, other than pharmacologically facilitated interviews,^{5,6} but this intervention is highly controversial.⁷

Family and friends can help patients recover lost memories by reminding them of major life events or showing them photos. Psychotherapy and medications may help curtail the anxiety



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© 2021 HCA Physician Services, Inc. d/b/a Emerald Medical Education HCA Healthcare Journal of Medicine and depressive symptoms associated with amnesia. $^{\rm 8}$

Case Presentation

The patient is a 50-year-old man found wandering on the street by a community outreach team. He was in a disheveled condition with no memory of his true identity. The earliest memory about himself that he could recall was 8 months prior, waking up at the local airport with no shoes on and not knowing who he was or how he had gotten there. He then tried to access community shelter services, but because he had no ID and no way to recall his name or date of birth to obtain an ID, he was denied access. Approximately one month later he was stopped at a local bus stop by law enforcement, and when he couldn't tell them his identity they transported him to the nearest medical hospital. There he received a medical workup including labs, bilateral lower extremity ultrasound for DVT (deep venous thrombosis) to rule out PE (pulmonary embolism)-related confusion, and a head CT, all of which were unremarkable. (Table 1) He was then discharged back to the streets.

One month later he was admitted to a local community psychiatry hospital for self-neglect. A urine drug screen was negative. Records from the outside hospital were reviewed, and he was not started on any psychiatric medications as no significant psychosis or depressive symptoms were observed across five days. He was discharged to a friend with referrals to community resources. He had chosen a new name. Six months later he came to a shelter where he presented with stiffness and difficulty extending his fingers. The primary care provider also noted his left third finger flexed but had no palpable contracture. He was able to fully extend passively but he resisted this with a smile.

At his initial psychiatric evaluation the patient was able to recall events since waking at the airport until his arrival to the shelter; however, he was unable to recall any biographical information. (**Table 2**) Therefore, it was very difficult to obtain prior records or refer to services that typically require an ID, such as housing. The case manager did extensive work to find his identity, initially bringing him to be fingerprinted and checking through both local and national missing person clearinghouses and networks databases with no results. The case manager then obtained records for any "John Doe" at the hospitals he reported using in the months prior.

Finally, the case manager secured funding to obtain DNA tests for commercially available genotyping databases and the patient provided a sample. The case manager was then able to connect with a genetic detective through social networking. The genetic detective was able to find the patient's Facebook and LinkedIn pages, and court records of a past foreclosure, which helped the patient recall his biographical information. After establishing his true identity, the patient recalled stressful circumstances involving his marriage, daughter's health issues and job. He also recalled that he had had such episodes of amnesia in the past. With his iden-

| Table 1. Workup for Dissociative Amnesia.Laboratory Studies | Imaging/Other Tests |
|---|-----------------------|
| Complete blood count (CBC) with differential | Chest X-Ray |
| Comprehensive metabolic panel | CT head |
| Blood cultures | PET scan ⁹ |
| Hemoglobin A1c | EEG |
| Thyroid stimulating hormone | EKG |
| Vitamin levels such as D3, B12, folate | |
| PCR for Human Immune deficiency virus (HIV) | |
| Rapid plasma reagin (RPR) | |
| Urinalysis | |
| Urine drug screen and blood alcohol level | |

 Table 2. Selected Psychological Testing.

Selected Psychological Testing

Dissociative Experiences Scale (DES-II). Evaluation of dissociative symptoms distinguishing four criteria: absorption, depersonalization, de-realization and amnesia.^{10,11}

Autobiographical Memory Interview (AMI).¹²

Trail Making Test. Tests for attentional speed, sequencing, mental flexibility, visual search and motor function.¹³

Rey Verbal and Auditory Test (RAVLT). Used to evaluate verbal learning and memory, including proactive inhibition, retroactive inhibition, retention, encoding versus retrieval and subjective organization.¹⁴

Minnesota Multiphasic Personality Inventory (MMPI). Determines personality profiles that help in the detection of psychopathology.¹⁵

Wechsler Adult Intelligence Scale (WAIS-R). Cognitive functions associated with David Wechsler's intelligence factors. Among other indicators, it determines Verbal IQ and Performance IQ.¹⁶

The Rey 15-Item Memory Test (RMT). Used to detect malingering.¹⁷

Montreal Cognitive Assessment or MOCA.¹⁸

Structured Clinical Interview for DSM-IV[®] Dissociative Disorders (SCID-D-R). Semi-structured interviews designed to measure personal past facts and evocation of specific events from the subject's life.¹⁹

tity established, the case manager was able to get him disability benefits, healthcare insurance and transitional housing.

Medical records from his prior psychiatrist were then obtained and showed that the patient had worked in the IT department as a software developer for 19 years and had managed his job, house and finances. His problems at work started due to a change in management. He was assigned to a different job in which he lacked education and experience.

He was never treated for psychosis in his early life per records, although his mother noted that while he was in college he claimed that he could communicate with spirits and received special messages while using the computer. Due to poor productivity at work his employer requested evaluation by a psychiatrist and at the age of 43 he was diagnosed with major depressive disorder (MDD) and attention deficit hyperactivity disorder (ADHD). He also reported a history of using cocaine, ecstasy, speed and pain pills 10 years prior but none since. During this period, his wife called to report bizarre behaviors and referenced prior instances of dissociative-like episodes. Per medical records, the patient had mild amnestic events where he found himself waking up in closets

with no recollection of preceding events. There was a break in care for 4 years and then at the age of 47 he reported getting a divorce, los-ing his job and undergoing foreclosure on his home.

The patient had multiple depressive episodes, despite having transcranial magnetic stimulation and trialing multiple medications, including mirtazapine, bupropion, sertraline, escitalopram, paroxetine, venlafaxine, desvenlafaxine, vilazodone, olanzapine and risperidone, which were all stopped due to poor response. Pharmacogenetic testing found COMT, ADRA2A, OPRM1, MTHFR and serotonin transporter systems to be unremarkable for population variants affecting medication metabolism. His psychiatrist added alprazolam for better control of anxiety as his symptoms were partially responsive to clonazepam. He was also tried on methylphenidate, dextroamphetamine/amphetamine and clonidine for his concentration. Despite medication management, the patient's condition did not improve and he took short-term disability leave from his job due to worsening of his memory and concentration.

He reported persistent difficulty performing his activities of daily living due to an inability to concentrate and remember. Neurocognitive testing with the Montreal Cognitive Assessment during his initial evaluation scored at 26, then scored 25 out of 30 one year later,¹⁸ which did not explain significant cognitive impairment.

He declined medication but did engage in psychotherapy. The therapist discussed that trauma can lead to dissociative episodes but the patient could not recall any history of abuse in childhood or adulthood, and denied nightmares or flashbacks for symptoms of post-traumatic stress disorder (PTSD). He did continue exhibiting odd beliefs and bizarre theories that lack details, such as statements about the need to "retreat to reconnect to my spiritual path" and that he is "meant to complete a mission."

Given his continued difficulties with concentration, odd posturing/movements possibly related to Tourette's versus somatization, and his history of ADHD, he did agree to a retrial of clonidine. The patient's final diagnoses included dissociative amnesia with fugue, ADHD, possible Tourette's syndrome and possible schizotypal personality disorder, as well as history of recurrent MDD and Asperger's syndrome (DSM5: autism spectrum disorder). (**Table 3**)

Discussion

Dissociative amnesia is usually preceded by trauma or abuse such as childhood abuse, kidnapping, incest, rape, physical violence, witnessing violence, or experiencing or witnessing injuries in wartime or a combat zone. Research shows that dissociative amnesia develops and presents with a variable clinical presentation depending on the intensity, duration and age of exposure, which also influences prognosis and recovery.²⁰ The epidemiology of dissociative amnesia has not been satisfactorily investigated, but the few research studies that have been conducted indicate a peak incidence of 2–3% in the third and fourth decades of life.²¹

The inability to recall biographical information seems to be an unconscious intrapsychic defense, which the patient possibly used to exclude unwanted or painful memories. Consideration of an organic etiology for amnesia versus malingering or a factitious disorder were considered but his workup was negative for organic etiologies. Even the repeated brain MRI did not show any lesions and physical exam was negative for signs of upper or lower motor disease, which was ordered in the context of transient contracture in both hands. Some individuals may present with amnesia to hide their identity to avoid criminal prosecution or other financial losses like child support or alimony. This patient had a stable married life, with a high-paying job and a home, but he lost everything and subsequently became homeless. Regardless, the patient was at least homeless and without source of income. The patient had identified risk factors for malingering (contractures in hand but was seen with normal hands while walking and holding a coffee cup), and possibility of secondary gain for financial benefits/housing as patient was homeless), which were unable to be ruled out.

It is imperative to note that having ADHD and MDD diagnosed in his 40s without any pri-

| Table 3. Differential Diagnosis. | |
|---|--|
| Organic Causes | Psychiatric Causes |
| Ordinary Forgetfulness | Mood Disorder episodes |
| Delirium (can be related to cardiovascular dis- ease, metabolic abnormalities) | Psychotic Disorder episodes |
| Postoperative amnesia | Post-Traumatic Stress Disorder or Acute Stress Disorder |
| Post-electroconvulsive therapy/ECT, infection, etc.) | Other Dissociative Disorders |
| Posttraumatic amnesia, transient global amne- sia | Somatic symptoms disorder |
| Amnesia related to seizure disorders | Substance Use (intoxication or withdrawal) |
| Korsakoff's syndrome | |

Table 3. Differential Diagnosis.

or symptoms or episodes in childhood raises concern for possible negative symptoms of schizophrenia, which can also present with poor attention, lack of focus, distractibility and internal occupation. However, the patient did not ever have overt psychosis. His bizarre beliefs may be more attributable to Asperger's syndrome (now autism spectrum disorder) or schizotypal personality disorder.

Conclusion

This case presentation of dissociative amnesia is important for several reasons. First, the patient did not have classic PTSD or an abuse history as a trigger, but his significant stressors were change of job in context of autism spectrum disorder, coupled with a history of possible psychosis and polysubstance use. Second, his current presentation is guite complex, with an array of psychiatric signs and symptoms including signs of conversion disorder and posturing that may be related to an atypical tic disorder or an underlying psychosis or catatonic dimension that is not presenting with positive symptoms. Third, the case describes best practices for discovering the identity of those with dissociative amnesia, including searching relevant databases and "John Doe" records, and using fingerprinting/genetic testing (www.23andme.com) combined with social media. Fourth, he suffered from recurrent major depressive episodes, which is known to adversely affect memory and neuroplasticity.

Limitations in this case report include lack of collateral information directly from the family and limited availability of funding to obtain full diagnostic imaging and neuropsychological testing. As of now, the exact mechanism of the psychopathology causing the patient's neurocognitive impairment is unknown.

Currently, there are no FDA approved medications to treat dissociative amnesia and treatment is supportive care with other modalities of psychotherapy and rehabilitative services.21 Due to lack of personal resources, individuals with dissociative amnesia may be more likely to seek care at Federally Qualified Health Centers (FQHCs). In turn FQHCs should be prepared to evaluate and provide supportive treatments as well as case management assistance for stable housing, vocational rehabilitation, healthcare and disability benefits. They should also provide ongoing medical and psychiatric care as appropriate, as those with dissociative amnesia represent some of the most vulnerable individuals who may present to social service, law enforcement and healthcare systems.

Conflicts of Interest

The authors declare they have no conflicts of interest.

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Author Affiliations

- 1. Orange Park Medical Center, Orange Park, FL
- 2. University of Florida Health Jacksonville, Jacksonville, FL
- 3. Sulzbacher Center, Jacksonville, FL

References

- Reed JM, Squire LR. Retrograde amnesia for facts and events: findings from four new cases. *J Neurosci*. 1998;18(10):3943-3954. <u>https://doi.org/10.1523/JNEUROSCI.18-10-03943.1998</u>
- Foote B, Smolin Y, Kaplan M, Legatt ME, Lipschitz D. Prevalence of dissociative disorders in psychiatric outpatients. *Am J Psychiatry*. 2006;163(4):623-629. <u>https://doi.org/10.1176/appi. ajp.163.4.623</u>
- Clouden TA. Dissociative amnesia and dissociative fugue in a 20-year-old woman with schizoaffective disorder and post-traumatic stress disorder. *Cureus*. 2020;12(5):e8289. <u>https://doi. org/10.7759/cureus.8289</u>
- Mueller-Pfeiffer C, Rufibach K, Perron N, et al. Global functioning and disability in dissociative disorders. *Psychiatry Res.* 2012;200(2):475-481. <u>https://doi.org/10.1016/j.psychres.2012.04.028</u>
- Sadock BJ, Sadock VA. Kaplan & Sadock's Synopsis of Psychiatry. 10th ed. Wolters Kluwer; 2007.
- Ilechukwu ST, Henry T. Amytal interview using intravenous lorazepam in a patient with dissociative fugue. Gen Hosp Psychiatry. 2006;28(6):544-545. <u>https://doi.org/10.1016/j. genhosppsych.2006.08.001</u>

- Loftus EF, Davis D. Recovered memories. Ann Rev Clin Psychol. 2006;2:469-498. <u>https://doi.org/10.1146/annurev.clinpsy.2.022305.095315</u>
- Oken D. Multiaxial diagnosis and the psychosomatic model of disease. *Psycho*som Med. 2000;62(2):171-175. <u>https://doi.</u> org/10.1097/0006842-200003000-00002
- 9. Foote B, Smolin Y, Kaplan M, et al. Prevalence of dissociative disorders in psychiatric outpatients. *Am J Psychiatry*. 2006;163(4):623-629. <u>https://doi.org/10.1176/appi.ajp.163.4.623</u>
- 10. Bernstein EM, Putnam FW. Development, reliability, and validity of a dissociation scale. J Nerv Ment Dis. 1986;174(12):727-735. <u>https://doi.org/10.1097/00005053-198612000-00004</u>
- Saggino A, Molinengo G, Rogier G, et al. Improving the psychometric properties of the dissociative experiences scale (DES-II): a Rasch validation study. *BMC Psychiatry*. 2020;20(1):8. <u>https:// doi.org/10.1186/s12888-019-2417-8</u>
- Kopelman MD. The Autobiographical Memory Interview (AMI) in organic and psychogenic amnesia. *Memory*. 1994;2(2):211-235. <u>https://doi. org/10.1080/09658219408258945</u>
- Llinàs-Reglà J, Vilalta-Franch J, López-Pousa S, Calvó-Perxas L, Torrents Rodas D, Garre-Olmo J. The Trail Making Test. Assessment. 2017;24(2):183-196. <u>https://doi. org/10.1177/1073191115602552</u>
- Vogel A, Stokholm J, Jørgensen K. Performances on Rey Auditory Verbal Learning Test and Rey Complex Figure Test in a healthy, elderly Danish sample--reference data and validity issues. *Scand J Psychol.* 2012;53(1):26-31. <u>https://doi.org/10.1111/j.1467-9450.2011.00909.x</u>
- Floyd AE, Gupta V. Minnesota Multiphasic Personality Inventory. In: *StatPearls*. Treasure Island (FL): StatPearls Publishing; May 1, 2021. <u>https:// www.ncbi.nlm.nih.gov/books/NBK557525</u>
- Wechsler D. Wechsler Adult Intelligence Scale--Fourth Edition (WAIS-IV). APA PsychTest. American Psychological Association; 2008. <u>https://doi. org/10.1037/t15169-000</u>
- Lee GP, Loring DW, Martin RC. Rey's 15-item visual memory test for the detection of malingering: Normative observations on patients with neurological disorders. *Psychol Assess*. 1992;4(1):43-46. <u>https://doi.org/10.1037/1040-3590.4.1.43</u>
- MoCA Paper. MoCA Cognitive Assessment. Accessed September 23, 2021. <u>https://www.mocatest.org/paper</u>
- 19. Steinberg M. Advances in the clinical assessment of dissociation: the SCID-D-R. *Bull Menninger Clin.* 2000;64(2):146-163.
- Jans T, Schneck-Seif S, Weigand T, et al. Longterm outcome and prognosis of dissociative disorder with onset in childhood or adolescence. *Child Adolesc Psychiatry Ment Health*. 2008;2(1):19. <u>https://doi.org/10.1186/1753-2000-2-19</u>

 Sharma P, Guirguis M, Nelson J, McMahon T. A case of dissociative amnesia with dissociative fugue and treatment with psychotherapy. *Prim Care Companion CNS Disord*. 2015;17(3):10. <u>https://doi.org/10.4088/PCC.14I01763</u>