



Josie: An Interdisciplinary Case Study of Madness

by

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Part I – The Apartment

A sliver of sun peaked over the roof of the apartment building across the street, creating just enough shadow to keep Josie from working the tiny key into the rusted lock on her front door. Her fingers tingled slightly, pins and needles, and she switched the key to her other hand. Leaning against the doorframe, a familiar round of nausea washed across her body, pounding and retreating like waves on the Sunderland beach of her childhood. Taking deep breaths, she pressed the key into the lock and slid inside, careful to avoid catching her fishnet stockings on the loose nails sticking out of the jamb. “If I rip another pair of stockings,” she yelled to the empty hall, “I’m suing. This place is a dump!”

The landlady, Mrs. Beck, opened her door a few inches, not bothering to release the chain. “If you don’t like it,” she yelled back, “move! But keep it down or I’ll call the cops and have you arrested for soliciting.”

Soliciting. That was a nice word for what Josie did; others called her a tramp. But Josie preferred the term “escort,” noting that most of her clients were repeat customers, drawn to her unique Goth look and special talents.

Josie raised her black-gloved hand in a one-finger salute and continued up the creaking stairs to her second-floor apartment. Once inside, she latched the five deadbolts she’d installed against Mrs. Beck’s wishes, tapped each lock three times, and then muttered her brother’s name exactly three times: “Patrick. Patrick. Patrick.” A sheen of cold sweat gathered on her brow and she shivered. Her eyes darted around the room, looking for anything out of place. Satisfied, she took a deep breath and relaxed, unbuckling the studded leather collar around her neck and massaging the tender white skin beneath her short, cropped, black hair. Two of her four cats, Midnight and Moonlight, purred a greeting and affectionately marked her, rubbing their sleek black bodies against her legs. She removed her heavy boots, black stockings, and zebra mini-skirt, grimacing at the few rays of sunlight she saw filtering through an inch of exposed grey glass. She tugged on the foil-lined black-out shades until darkness consumed her.

Opening the refrigerator and scanning the shelves for something that might soothe the sharp pain in her side, she saw nothing other than some hamburger, a few old pickles and beets, and a couple of raw steaks, the sight of which made her heart race and pound against her breastbone. Leaning against the warm refrigerator door, she felt her body melt, as if floating away. *I’m dying. Only 21, and I’m dying.* Josie reached for the phone on the counter and another lightning sharp pain ignited low in her abdomen forcing her to the floor, where she noticed a small pool of blood. Josie vomited violently, again and again. Too weak and in pain to reach for the phone, she summoned her last bit of strength and screamed for help.

Question

1. What is wrong with Josie? Why do you think this?

Part II – The Hospital

The doctor said it was a miscarriage. The words had hit Josie like a fist; she hadn't known she was pregnant.

"Am I okay?" she asked. "I mean, how long will I be in the hospital?"

The doctor looked up from the chart he carried. "Oh, you won't be staying, Ms. West. You had a complete miscarriage—no tissue remains—and you're free to go home. Just take it easy for a few days."

Josie glanced at the nurse who had admitted her to the ER, carefully studying the woman's ID badge: Kitty Hurst. *A good sign.* "Can I, though? Can I stay just one night? Just in case..." Her voice trembled and she stumbled over her imploring words. "This wasn't the first time I've had pain," she insisted. "It's happened before—lots of times. And I wasn't pregnant. It feels like ... like I'm dying. Something is really wrong with me." Kitty placed a warm hand over Josie's and shook her head, a wave of sympathy evident in her eyes.

Weary of having the homeless and hopeless beg for the luxury of a hospital stay, the doctor was cold. "Ms. West, I think once you get home to your own bed, you'll feel much better. You're a touch anemic and I'd recommend a good iron supplement, but otherwise your hematocrit and hemoglobin are fine, and there's no reason for us to keep you. Our beds are for the sick, Ms. West. And you are *not* sick."

"I *am*," she insisted. "I have headaches—terrible headaches." Her voice rushed forth like water over a dam. "And I have this tingling feeling in my fingers and toes; like they're falling asleep. Like I've been drugged or something. Did you run a test for drugs? I might have been drugged."

"All of your tests are fine," he repeated. "We ran a toxicology screen and you were negative for anything other than Klonopin and Tofranil, which you already told us about." He looked at the chart one more time. "Your blood pressure is a little high, so I'm going to write you a script for hydralazine and the nurse will go over any questions you have before you leave. You can pick up some over-the-counter iron supplements when you fill the prescription at the drug store." He grinned in the general direction of her bed and nodded dismissively. "It was nice meeting you."



The knocking on the front door grew increasingly loud. Josie curled herself into a ball and put her pillow over her head, wishing it away. Moonlight curled into the crook of her neck and began to purr. *Moonlight, Midnight, Twilight, Eclipse ...* She rehearsed the names of her beloved cats, hoping for comfort.

"I know you're home," Mrs. Beck yelled from behind the door. "And you're two weeks late on your rent. If you don't open this door, I'll have you evicted." She paused, waiting for a response that never came. "I have a key, you know!"

Josie groaned, remembering she had forgotten to turn the deadbolts. She curled up tighter; it was too painful to move. The lightning in her abdomen was intense and sweat pooled on her forehead and chest, while she shivered under thick wool blankets. *Just let me die ...*

She barely heard the key in the lock or the angry click of Mrs. Beck's shoes on the kitchen floor, but when she opened her eyes, the older woman was staring at her with shock and sympathy. "You look awful," Mrs. Beck said. "You need a doctor."

Josie closed her eyes again. She was too tired to see a doctor, in too much pain to even speak. *Moonlight, Midnight, Twilight, Eclipse ...*

"... call an ambulance." Mrs. Beck's voice was the last sound Josie heard before the blessed darkness of unconsciousness took her away.

Questions

1. What do you now think is wrong with Josie? Why do you think this?
2. If you changed your mind from what you thought after reading Part I, what factors made you change your mind?

Part III – Blood

When she regained consciousness, Josie was again in the hospital with Nurse Kitty by her side.

“Welcome back,” Kitty said, pulling a chair alongside the bed. “Do you know where you are?”

“The hospital,” Josie mumbled. “I was sick.”

“Um hmmm. You were, and you are,” Kitty said. “You had a secondary infection after the miscarriage. Dr. Adams performed a dilation and curettage when you came in.”

Josie glanced at the IV bags dripping into her arm: one clear and one red.

“The procedure was complicated by the severity of your infection,” Kitty continued. “You needed two pints of blood and the doctors have you on antibiotics to treat the infection. We’ll keep an eye on you for the next few days, and if the infection subsides, you’ll be discharged on Friday.”

Kitty leaned in further, checking her pulse. “Your pulse is still a little fast,” she said. Kitty smiled—then said softly, “I’d like you to meet with someone from psychiatry.” She waited as if anticipating protest, but when none came she continued. “Mrs. Beck told us that you’ve been holed-up in your house since the last time I saw you, that you told her you wanted to die.”

Tears welled in Josie’s eyes. *Had she said that out loud?* She’d tried to hide it, the crying jags, the confusion, and her inability to remember even the simplest things; no one wanted a grieving call girl. But as Kitty reached forward to stroke her hand, Josie felt a small ray of hope. She was feeling better than she had in weeks. Yes, she’d talk to the psychiatrist ... anything to move on.



“I need more blood.” Josie’s grip on Kitty’s arm was tight, fingernails digging into the nurse’s soft flesh. *Midnight, Moonlight, Twilight, Eclipse* The words echoed in an endless loop in her head, but her panic failed to subside. “I know you have it. Just give me one bag, and I’ll prove it to you. I am a vampire now. Just one bag, and you’ll see how well I am.”

Kitty pulled back, massaging her arm and gazing at her patient with a look of dismay. “You need to relax,” she murmured. “You don’t need blood, Josie. Your body is healing nicely and...”

“Oh my God!” Josie’s voice rose with panic. “I can’t feel my arm!” With her left hand, she dug viciously into the flesh of her right arm. “I can’t feel this. I can’t move. I can’t ...” Her eyes darted wildly around the room. “Why won’t anybody listen? I don’t want to kill anybody. Please. Just one bag of blood. I know you have it.”

Alerted by the staff, a resident from psychiatry came into the room just as Josie bit deep into her own arm, breaking the skin and drawing blood.

“I’m dying!” she screamed. “I need blood. Why won’t you listen! I don’t want to hurt anybody.”

The nursing staff restrained her arms, securing them to the bed rails before treating the self-inflicted wound. “Call my brother,” Josie yelled. “He’ll tell you. He understands. Call my brother!”

Kitty looked to the resident. “I don’t know what happened,” she said. “Two days ago she was fine. We expected to discharge her today, but in the middle of the night her mental status deteriorated. She told the night staff that the human race was ‘going back to the animals’ and she was becoming a vampire.”

“What meds is she on?” he asked, reaching for the chart. “Tegretol, Klonopin, Clonidine, Tofranil, hydralazine... Quite a cocktail.”

Kitty shrugged. “She’s depressed and she’s been having panic attacks.”

“Labs?”

“Normal. BP 120/70, pulse 105, temperature 99.3 at last check. Dr. Breen ordered a CT scan because of the twitching, and there were no significant findings.”

“Urine?” the resident asked, not looking up from the chart.

Kitty blinked hard. “Urine?”

“Did you notice anything about her urine?”

Kitty thought. “No. Urine was clean. No signs of a UTI.” She paused. “But come to think of it, the lab tech did say something about it being a funny shade of reddish-purple. Do you think that matters?”

The resident put the chart back on the end of the bed. “I’m not sure, but it might.” He moved to the window, reaching to open the blinds.

“No!” Josie shrieked like a banshee.

Nurse Kitty held up her hand. “She doesn’t like the light,” she explained. “Says it causes her pain.”

The resident stepped back from the blinds, studying Josie as she pulled at the restraints and sniffed at the air like a wild dog.

“Don’t you smell it?” Josie yelled. Her body arched and wretched. “Don’t you smell it? I’m rotting. My flesh is rotting and no one cares!” Vomit spewed over the edge of the bed, then Josie began to twitch, arms and legs jerking spasmodically, reminiscent of a scene from *The Exorcist*. “Somebody help me!” she screamed. “Call my brother!”

“I will,” Kitty said. “I promise, honey. I’ll call your brother.”

Questions

1. What do you now think is wrong with Josie? Why do you think this?
2. If you changed your mind from what you thought after reading Parts I and II, what factors made you change your mind?

Part IV – Patrick

True to her word, Kitty attempted to track down Josie's brother. When her search of Josie's record revealed no relatives, she contacted the only person who had ever shown interest in the girl: Mrs. Beck. Unfortunately, Mrs. Beck was more interested in discussing how she might get her rent money for the month than in finding lost relatives. However, she did reveal that the apartment was originally leased to Josie and her twin brother, Patrick, who died nearly 10 months prior from "some genetic disease that made him 'soft in the head'."

Calmed by an injection of sedative, Josie was moved to the psychiatric unit of the hospital for further evaluation. Her mood was euthymic and she continued to believe that she needed to drink blood and eat raw red meat in order to survive.

Questions

1. Finally, what's wrong with Josie? Why do you think this?
2. What clues from the story led you to this thinking?
3. What outside information did you gather in supporting your hypothesis?
4. What information would you like that you do not presently have?

Part V – A Family History

Settling into a cracked leather chair in the resident lounge and cracking open his fourth Diet Coke, Dr. Brad Stevenson kicked off his shoes and opened the worn journal in his hands. He felt his pulse quicken at the prospect of seeing a new side of his patient, Josie West. He'd felt an instant rapport with Ms. West, a twin like himself; a twin who'd lost her other half and wandered the world alone. Every bed in the unit was full, and he had few spare moments, but when he found an empty minute or two, he always managed to visit Josie, to give her a little extra time and attention. And then this morning, she'd rewarded him with her journal, a collection of stories and memories of her life with Patrick.

"I asked my landlady to bring it in," she'd said. "I want you to read it. You're the only one who will understand."

Understand? Dr. Stevenson was still unsure what it was he was supposed to understand, but he turned the pages one after another, eager to catch a glimpse of Josie's uncensored life, to find a clue that would open the door to the mystery of this lost young woman.

Josie's journal was remarkably literary. Page after page was punctuated by strange descriptions of her childhood: a family of night-owls who slept during the day and worked and lived third shift; her Uncle Phillippe's daughter, Carol-Anne, who wore jewelry filled with blood; paternal grandparents Charles and Madeline, rumored to be a voodoo priest and priestess, who raised eight children in a three-room house; and a family legacy of professional grave-diggers. Dr. Stevens shuddered as he read about Grandma Madeline, the voodoo priestess, who achieved infamy for drinking from the open necks of freshly beheaded chickens as part of her rituals, and who was rumored by Josie's maternal grandmother, Jeannette, to have played a role in the mysterious death of her husband, Josie's maternal grandfather, Bryant Cenas. Each member of the West family seemed stranger than the next. But it was the saga of Josie's paternal twin uncles, Philip and Phillippe, which kept Dr. Stevenson turning pages until the first rays of morning light spilled over the hospital walls.

Fraternal twins and bitter rivals from birth, Philip and Phillippe were con men and career gamblers whose losing streak was notorious in Louisiana. In his early twenties, Philip began cutting his own flesh and sucking at his wounds. A particularly deep cut in his wrist resulted in a successful suicide in 1989. Phillippe's sisters (Josie's aunts), Mary, Lauren, Corrine, and the identical twins, Katy and Kathy, told the police that Phillippe had caused the death of Philip with "voodoo magic," but investigators relied on psychiatric reports of self-mutilation as a sign of borderline personality disorder, and dismissed the supernatural. Almost immediately, Phillippe became a millionaire, winning whenever he gambled and earning himself the nickname: "Mr. Charmed."

After hours of reading story after story, Dr. Stevens' head became muddled. *Odd behavior and belief in the supernatural seemed to run in the family—that was for sure. But only on one side?* He crossed the room to find Josie's clinical file, hoping to find a detailed family history, but all he found was a brief psychosocial summary statement by the hospital social worker:

Josie Laveaux West is a 21-year-old Caucasian female. Josie reports being one of four children, born and raised in a small town just outside of New Orleans. Josie has a twin brother, Patrick, who died approximately 1 year ago from unknown causes. She has a half-sister, Charlotte, from a brief affair between her father, Sean, and an exotic dancer known only as "Paulina." Paulina was reportedly murdered two years after the birth of Charlotte, and the toddler was adopted by Josie's mother, Violet West, when Josie was three years old. Josie claims Charlotte disappeared a year after the car accident that claimed Violet and Sean's lives in 2002. Josie also has an older sister, Sophia, whom she describes as "perfect in every way ... a little Barbie doll who went off and married a straight-laced jerk named Ken, and gave birth to another genetically perfect little Ken-doll." Patient seemed compelled to report that Ken, Sr., was genetically tested before attending flight school and found to be "perfect in every way." She laughed bitterly and for a prolonged period while recounting the irony that Sophia and Ken took their "genetically superior clan" and moved to LA to "escape the craziness in our family," but then had identical twin daughters, Margaret and Savannah, whom Josie described as: "Yin

and Yang.” “One of the girls is ‘little Miss. Perfect,’ but the other is just as messed up as the rest of us. She’s only three and she’s already hearing ‘The Voice.’” (Patient refused to elaborate on the nature of “The Voice” and refused to answer when pressed about her own relationship with “The Voice.”) Patient recounts that people in her family were always “unique,” preferring to conduct their lives in the nighttime hours rather than in the day. Josie claims her family was physically healthy, but also states that many of her family members were “very sensitive to the sun” and preferred the third shift. Patient reports a “lonely childhood” and states that her brother was her only friend. She states that her mother and maternal grandparents were phlebotomists for the Red Cross, and her father followed his father, grandfather, and uncles and worked as a grave-digger.

Dr. Steven’s rubbed his eyes and glanced back at Josie’s journal. *There is something in here*, he thought. *Something important.* But the late hour, or his lack of sleep, was making it hard for him to solve the puzzle. Taking out a clean sheet of paper and a pen, Dr. Stevens used his training to find the missing piece.

Assignments

- Assignment A: Assemble a family pedigree for Josie. Josie is the proband and the trait Dr. Stevens is following is odd behavior.
- Assignment B: Create a genogram for Josie using standard symbols.
- Assignment C: Compare your pedigree/genogram with the one provided. (Note: Handouts contain expanded representations of multiple generations.) How well did you assemble yours? Reflect on the difficulty/ease of using Josie’s journal and case file for this task—is retrospective analysis suitable? Why or why not?
- Assignment D: Using the pedigree your instructor provided, assess whether there is a mode of inheritance for this “odd” behavior. Could it be autosomal or sex-linked, is it dominant, recessive, fully penetrant, variably expressed, etc.? Develop a genetic hypothesis to explain the results.
- Assignment E: Using the genogram your instructor provided, assess whether there are significant traits/trends in this family. Develop a family-systems hypothesis to explain Josie’s presentation.

Part VI (A) – Schizophrenia

Schizophrenia is the most well-known mental illness in a category of disorders known as psychoses, and marked by “a severe disturbance in the individual’s experience of reality about the world and the self.”

The DSM-IV-TR distinguishes five subtypes of schizophrenia, distinguished by the presence and absence of positive and negative symptoms. Positive symptoms include those that involve the presence of abnormal mental processes or behaviors. For example, people with schizophrenia sometimes sense objects or events that no one else can sense (hallucinations) or hold persistent false beliefs even when there is disconfirming evidence (delusions). Negative symptoms of schizophrenia involve the absence or reduction of normal mental processes or behaviors. For example, people with schizophrenia may not display a range of emotions, talking in a dull or monotonous voice and failing to change their facial expressions, thus appearing “flat” or neutral even when they are experiencing intense emotions (flat affect).

Symptoms of schizophrenia typically develop during late adolescence or early adulthood in men, and about five years later in women.

The precise cause of schizophrenia is unknown; however, schizophrenia runs in families, with heritability estimates reaching as high as 85%.

For further information, see National Institute of Mental Health website, <http://www.nimh.nih.gov/health/publications/schizophrenia/what-are-the-symptoms-of-schizophrenia.shtml>.

Table B. DSM-IV-TR Diagnostic Criteria for Schizophrenia

- A. Characteristic Symptoms. Two (or more) of the following, each present for a significant portion of time during a 1 month period :
1. Hallucinations
 2. Delusions
 3. Disorganized speech
 4. Grossly disorganized or catatonic behavior
 5. Negative symptoms

Note: Only 1 Criterion A is required if delusions are bizarre or hallucinations consist of a voice keeping up a running commentary on the person’s behavior or thoughts or two or more voices are conversing.

- B. Social/Occupational Functioning. One or more major areas of functioning (work, interpersonal relations, self care) are markedly below the level achieved prior to the onset.
- C. Duration. Continuous signs of the disturbance persist for at least 6 months. This must include at least 1 month of symptoms that meet Criterion A and may include periods of prodromal or residual symptoms. During these prodromal or residual periods, the signs of the disturbance may be manifested by only negative symptoms or two or more symptoms listed in Criterion A present in an attenuated form (e.g. odd beliefs, unusual perceptual experience).

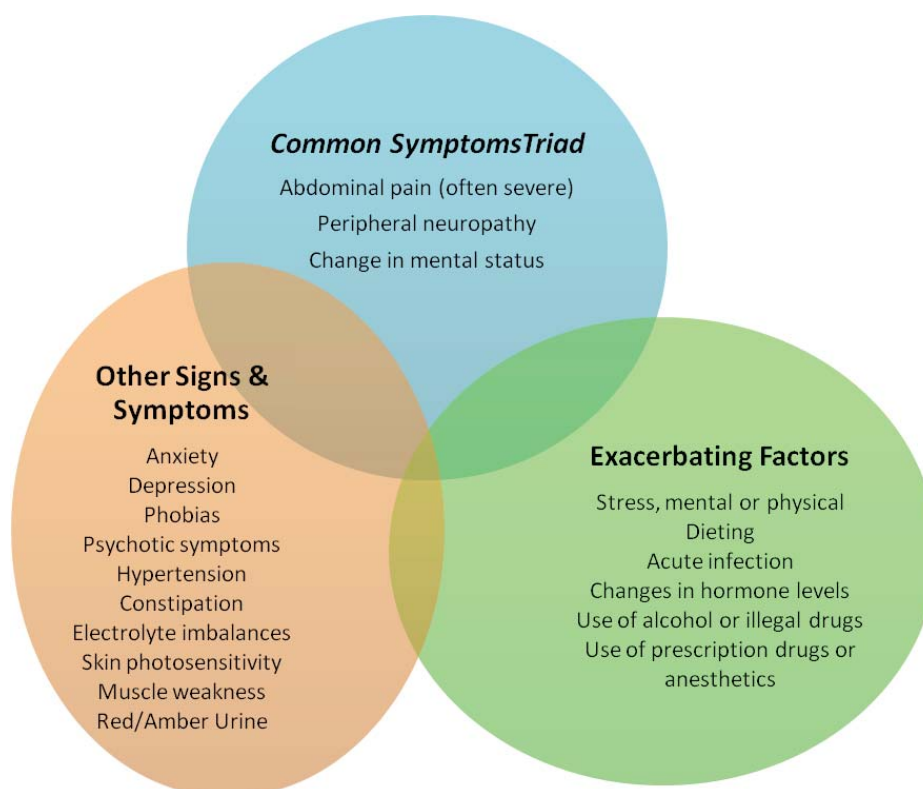
Part VI (B) – Porphyria, The Little Imitator

The porphyrias are a set of genetic diseases related to biosynthesis of heme, the non-protein portion of hemoglobin. Famous people throughout history believed to have suffered from porphyria include Mary Queen of Scots, King James VI, and King George III. Also, some believe one origin of the vampire legend stems from symptoms attributed to porphyria.

Porphyria has been called “the little imitator” because of the variety of possible presenting symptoms, many of which mimic other disorders. An affected person can experience a single mild attack or many severe attacks throughout life. The periods between attacks can be intervals of seemingly full health. Often times, a previously healthy, fully functioning person of sound mental health will present with unexplained pain, neurological symptoms, and psychiatric symptoms. An example is a 47-year-old florist without any previous medical or psychiatric history with memory loss, confusion, hallucinations, paranoia, and aggressive behavior relating to the belief that his wife was stealing money from him. It took seven months to diagnose porphyria (Gonzalez-Arriaza and Bostwick, 2003).

For further information, see the Porphyria Foundation website, <http://www.porphyrifoundation.com/>.

The figure below summarizes the most common indications of porphyria as well as other possible, but less common, manifestations. The many factors known to intensify porphyria symptoms are indicated as well. The diagram points out the uniqueness of the symptom profile to each individual with porphyria, which further complicates an already difficult diagnosis.



Part VII – The Societal Frame

“Treating public illness has long been a process of trial and error guided by public attitudes and medical theory.”

—Kimberly Leupo

Use the information you have gathered to reflect on the questions below.

Questions

1. In the beginning of the story, did you think Josie was physically or mentally ill?
2. As Josie’s story continued, did your thinking about her change? How many times? What influenced you the most?
3. Do you think that Josie’s behavior or appearance influenced the care she received? What if Josie were a thirty-something suburban professional instead of a young goth prostitute?
4. Comment on Josie’s fate if she lived in:
 - (a) The 1600s, how would people respond to her? Why?
 - (b) The 1800s, would it be different from the 1600s? Why?
 - (c) Now, is today different? Why?
5. What questions still remain? What other information would help you decide what is wrong with Josie?

Part VIII – Classroom Extensions

Further research one of these extensions to this case study. Choose one of the following questions to develop a one-page essay.

Questions

1. With respect to the general public, how has the treatment of the mentally ill changed over time?
2. Biochemical alterations to human metabolism often result in altered mental behavior. Do you think medical professionals are sufficiently trained to differentiate medical from psychological illness, why or why not? Provide another illness which presents as a psychological concern but is chemically based.
3. Can the environment influence biochemical pathways and ultimately phenotypic expression? Use porphyria or another disease of choice to diagram and describe your thinking.
4. When diagnoses are made on lab results, are they definitive? Discuss specificity and sensitivity.
5. What is the probable course of action for Josie?
6. How do modern psychologists understand Renfield's syndrome?
7. What is the impact of mental illness among leaders in world history?

Further Reading

American Porphyria Foundation website, <http://www.porphyrifoundation.com/>, last accessed January 1, 2011.

Gonzalez-Arriaza, H.L., and Bostwick, J.M. (2003). Acute porphyrias: A case report and review. *American Journal of Psychiatry*, 160, 450–458.

McGrath, J., Saha, S., Chant, D., and Welham, J. (2008). Schizophrenia: a concise review of incidence, prevalence, and mortality. *Epidemiologic Reviews*, 30, 67–76.

National Institute of Mental Health website, <http://www.nimh.nih.gov/health/publications/schizophrenia/what-are-the-symptoms-of-schizophrenia.shtml>, last accessed January 1, 2011.

Suarez, J.I., Cohen, M.L., and Larkin, J. (1997). Acute intermittent porphyria: clinicopathologic correlation: report of a case and review of the literature. *Neurology*, 48, 1678–1683.



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