

## Seeing in the Dying Light: A **Ketamine** Case Study

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**Editor's note:** Just before this *Bulletin* went to print, National Institute of Mental Health-sponsored researchers published a study in the *Archives of General Psychiatry* finding that ketamine shows breakthrough potential as a treatment for major refractory depression. In this upcoming article, Dr. Hammerschlag describes a case study in which he utilized ketamine-assisted psychotherapy to help a patient work through difficult psychological material associated with advanced-stage cancer. MAPS will be exploring options for a ketamine/end-of-life pilot study, similar in design to three other studies in patients with anxiety associated with end-of-life issues: Dr. Peter Gasser's MAPS-sponsored study evaluating LSD-assisted psychotherapy, Dr. John Halpern's MAPS-initiated study evaluating MDMA-assisted psychotherapy, and Dr. Charles Grob's Heffter-sponsored research investigating psilocybin-assisted psychotherapy. All this research may eventually lead to FDA approval of psychedelic psychotherapy in general for anxiety associated with end-of-life issues, with therapists and patients able to choose between different substances at different stages of the psychotherapeutic process.

**K**ETAMINE is a pre-anesthetic adjunct first manufactured in 1965. A Schedule III drug, ketamine has accepted medical uses and can be prescribed by physicians, dentists and veterinarians. It is a short-acting dissociative with some psychedelic-like characteristics. Ketamine poses minimal risk of cardiac and respiratory complications, although, unlike other psychedelics, it can lead to physical dependency if used regularly.

Ketamine induces a dissociative state that causes subjects to lose track of time and place, and to detach from awareness of external stimuli, including pain. Professionals in the treatment of alcoholism, anxiety disorders, and posttraumatic stress disorder (PTSD) have effectively used ketamine-assisted psychotherapy to treat patients. Before treating Steve, the patient described in this case report, I had never used ketamine-assisted therapy in my practice.

Steve was 64 years old when I first met him in October, 2004. Ten years earlier, he had been diagnosed with non-alcohol related cirrhosis. In early 2000 he was diagnosed with liver cancer, and two years later he learned that he had metastatic disease to the bone. At that point, his doctors told him that he had about 6-9 months to live. He had been treated by chemotherapy, surgery and radiation, but his cancer continued to progress. By the time I saw him, he was no longer eligible for a liver transplant.

However, Steve was unwilling to give up the idea that he could heal himself. He was searching for healing methods and not preparing for death. Steve believed that he had been a shaman in a previous life, and wanted to regress back in time to speak with his previous incarnation. Steve believed that, by accessing this ancient knowledge, he could learn to heal himself. To this end, he wanted to take peyote in a Native American healing ceremony, hoping that it would facilitate his vision.

Steve first contacted me at the recommendation of a friend, since I have experience in the sacramental use of peyote in Native American ceremonies. During this initial meeting I advised Steve

to consider alternatives because peyote is irritating to the G.I. tract, and not dose-specific. Peyote use often causes vomiting, and if Steve vomited, he could bleed internally, which had already happened to him once. Steve and I talked and discussed alternatives that might be helpful, like hypnotherapy and past-life regression.

Steve and I had quite a bit in common and resonated with one another. We were both originally from New York City and had graduated from city high schools and colleges. Steve went on to law school, and became a distinguished attorney and later a federal judge. He had been married and divorced, with two grown children to whom he was close. Angry with doctors, he held them responsible for failing to diagnose sooner the extent of his metastatic disease. If they had found it earlier, he would have been eligible for a transplant. Despite his limited options, though, Steve was not ready to die.

Steve was rational, without evidence of thought disorder; moreover, he was an intelligent critical thinker with a quick wit. He described his spiritual life as ethnically Jewish, by which he meant he liked pastrami on rye and matzoh ball soup, but that he had no personal relation-

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ship with God, or any interest in developing one.

After our initial visit, Steve decided to explore hypnotherapy. During his second visit, he proved to be an easily inducible subject and was able to regress in time to Neanderthal days. At one point, Steve described seeing cavemen from afar, but felt reluctant to join them. I told him to open his hands, put them in front of himself, and approach them. He did so, and they made room around the fire. He sat down cross-legged in the circle but understood nothing they were saying. He did not speak to a shaman and was unable to go back any further in time.

When we talked about it later, he said he would love to go deeper into trance and asked if I could intensify the hypnotic experience. That's when I told him about ketamine-assisted therapy, and explained that ketamine could be legally prescribed and had been used clinically in the treatment of posttraumatic stress disorders (PTSD) and chronic alcoholism. Used in controlled conditions, there is strong supporting evidence that it can be helpful in making healthful changes, since it activates a portion of the brain that makes it possible to move beyond ordinary conceptions of time and space. I told Steve that I had not yet used it in my clinical practice but was willing to try, if he wanted. I told him to review the literature and talk about it with his children. By the next visit, he had done his homework and had decided to try it.

Steve had experimented with psychedelics in the 1960s and wasn't frightened at the prospect of working with them in a controlled setting. He only wanted to be sure that I would stay with him during the experience, and I told him that I wouldn't leave him and would be totally involved. I wanted to speak to his children, so I met with his son, who happened to be a local physician, and he told me that both he and his sister were fine with whatever their father wanted to do. He added that it didn't surprise him at all, and that he would provide the syringes and needles to cut his father's expenses.

#### **Ketamine session 1:**

**October 21, 2004**

For the first session, Steve brought along some crystals and stones from sacred

Mayan sites in the Yucatán. I told him to place them wherever he wanted, and lit the oil-lamp on my coffee table and some fragrant sage. I explained to him that we were preparing the space to receive the healing energy that will flow once the ketamine is administered.

Once these preparations were completed, I gave him a small dose (25 mg.) intramuscularly, to test his tolerance. Within three minutes, he described a warm tingling in his ears, which then spread to his face and lips. He appeared very comfortable and then described a sense of overwhelming peace and well-being. "It's like an endless orgasm," he exclaimed.

During guided visualization, Steve returned to the same Neanderthal cave. This time, when he approached the group, they recognized him and made room for him around the fire. He could not understand a word. Looking around he saw that the cave walls were covered with beautiful artwork. He saw handprints on the wall and got up to touch them. Watching him, a Neanderthal came over and put his hand on the wall and showed Steve how to make his hand print by spitting a chalky liquid over his hand. Steve put his hand on the cave wall and did the same. When he removed his hand he said, "Only this piece of me stays here."

Later, when I asked Steve what he meant, he said he'd left the handprint behind, but he was "flying out of here ... people leave their mark in the cave but their spirit moves beyond those walls." He marveled that primitive man had time to spend on art and not just survival issues. Then, he commented that although they were gone, and the animals they drew were gone, their spiritual power was still here for all to see and feel. He thought he had spent far too much time exploring the rational world, and far too little exploring this peaceful spiritual world. Steve noted with a smile that his natural tendency was always toward skepticism.

When we talked about it later, I was interested in whether his cave vision and flying away might have something to do with the direction in which he felt himself moving. I was hoping that he might see comfort in something other than his frantic pursuit of a cure. He said, "I know

you want me to talk about my soul with God, but that's not me. I'm just happy that I am moving in a direction that feels so peaceful."

**Ketamine session 2:**

**November 18, 2004**

I injected 50 mg. and within 3 minutes Steve felt the same enveloping warmth and peace. He described himself floating in the cosmos— "I feel light, I am light, there is a light inside me, I feel like I'm floating with the angels." He began humming and I joined him. He moved his hands over his body, asking his shamanic self to make itself visible so that he could heal himself. Then I followed his hands over his body, and together we spread this divine light all over. I pressed my fingers deep into the right upper quadrant of his abdomen to direct the energy into his liver. The intensity of the experience and the energy coursing through his body made my fingertips tingle.

After this session, Steve began going regularly to his health club and said he felt stronger.

**Ketamine session 3:**

**December 14, 2004**

Using 75 mg., Steve again entered a state of peaceful bliss, and he described sensing a harmonic chorus of celestial angels. Following Steve's wishes, I tried to guide him to a place where he could communicate with his shamanic soul. Enveloped in a sense of heavenly peace, I noticed tears rolling down his cheek. When I asked him what the tears were saying he said, "These are tears of joy, I have never felt so in tune with the whole universe. If this is God, I believe, but I don't want to talk to him."

By January, 2005, Steve was feeling stronger but his tumor markers were rising and his alphaphetoprotein (AFP) level was astronomically high. That month he learned of an experimental program at the University of Pittsburgh where researchers were injecting drugs directly into the liver. Desperate for a cure, he flew to Pittsburgh and they accepted him into the program on the condition that he discontinue his ketamine therapy. Steve wanted to participate in this research program, even though he knew it would cause weakness and nausea. I told him that I would support his choice, and that he

could take a break from ketamine-assisted therapy. Steve felt strong enough at this point to take a vacation with his girlfriend before beginning the new treatment.

From April through October, Steve returned to Pittsburgh monthly. On his last visit, though, the research doctors told him that they must stop the treatment because his tumor markers were continuing to worsen. He returned to Phoenix feeling quite depressed, seeing only darkness. He hoped that another ketamine-assisted therapy session would help him find some light and peace.

**Ketamine session 4:**

**October 18, 2005**

For this session, I raised the dose to 100 mg. Like last time, when Steve heard the "cosmic chorus", I hummed along with him. It happened to be the Jewish holiday of Yom Kippur and, unconsciously, my hum became a tune from that day's liturgy. Steve recognized the melody and hummed along with me. The Torah portion for that day was the story of Abraham's sacrifice of Isaac. While we were humming Steve had a vision of Abraham, dressed in flowing white garb. When he got closer, though, he saw that the flowing robe was actually a doctor's white coat. In front of Dr. Abraham was an altar on which Steve saw himself stretched out and bound. He saw Dr. Abraham with the dagger in his raised hand, and, just as he was ready to plunge it, God called out to Abraham and he stopped. Steve looked up at the knife, and it had been replaced by a beam of light. Steve felt the presence of an overwhelming sense of peace.

When we talked about the experience later, he said, "The knife is less scary," and then asked, "Do you think the light is my shaman talking to me?"

Over the next two months, Steve was hospitalized twice after fainting, leaving him with several bad bruises. He told me that he knew his health would continue to worsen but that he wanted to "bathe in the light one more time." I found myself wondering if he had finally come to peace with the imminence of his death.

**Ketamine session 5:**

**December 13, 2005**

At Steve's request, I gave him 125 mg of ketamine. Like before, he felt immensely peaceful, heard celestial angels

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singing, and soon we were humming together. I asked him if he could see the light at the end of the tunnel and he said, "There is no tunnel, there is only light. I am surrounded by light, I feel love and peace." He wondered if this was the healing conversation he had been looking for with his shamanic self.

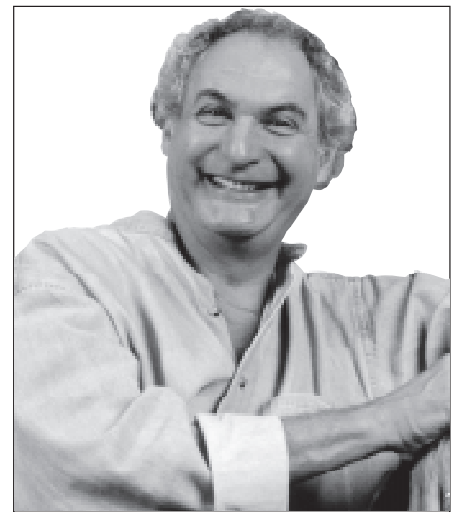
After this session, Steve continued to grow weaker and soon he was unable to get up without feeling wobbly and dizzy. I referred Steve to hospice, an option he had previously resisted. I explained that the hospice community is a place where one is surrounded by caretakers of light, and shortly after this discussion he moved into hospice treatment.

The week before Steve died, he told me this story. "I thanked my hospice nurse when she left the other day. I told her what a great job she was doing. She thanked me and said no matter how much money she was making (ha, ha, ha), that she loved this work and that to be with me inspired her to live her life with joy. There were tears in her eyes when she spoke to me and I had tears in mine." Then Steve said, "It's all about flying into the light and seeing your imprint on the cave wall." He thanked me for helping him see that light, and I told him I felt pretty much as his hospice nurse did, appreciative for having been with him on this journey.

Steve died on March 14, 2006, 10 years after his original diagnosis and five times longer than any of the doctors had estimated. At his funeral service his son said, "We all called my father the Energizer Bunny. His attitude inspires me."

Steve believed that if he could communicate with his ancient shamanic self, he might learn how to heal himself. The shaman he sought turned out to be a tribal ancestral messenger who turned the dagger of impending death into a beam of light. Through the use of ketamine, Steve realized that the shaman he sought was not in the lost continent of Atlantis, but within. When granted the opportunity to suspend ourselves from ordinary consciousness, we can make connections that may have previously eluded us. Steve was able to go to a place beyond our everyday conceptions of time and space, allowing him to make peace with himself and the cosmos.

I think the ketamine-assisted therapy allowed Steve to hang on to the idea that he could be healed, and, indeed, I believe he was. But there is a difference between healing and curing, and you can be healed even if you're not cured. Healing is about making connections to something other than yourself, something that reminds you that you're not alone on the journey. At the end of life, the connection to others who love us is priceless. Those connections are imprinted in the hearts of others and on the cave walls of the mind that endure, even once we are separated from our physical bodies. •



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