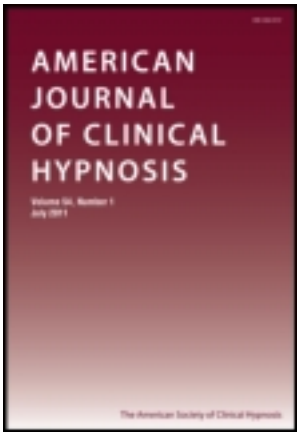

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Hypnosis to Alleviate the Symptoms of Ciguatera Toxicity: A Case Study

Eleanor D. Laser [a] & Philip D. Shenefelt [b]
[a] Private Practice, Chicago, Illinois, USA
[b] University of South Florida, Tampa, Florida, USA

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Hypnosis to Alleviate the Symptoms of Ciguatera Toxicity: A Case Study

Eleanor D. Laser
Private Practice, Chicago, Illinois, USA

Philip D. Shenefelt
University of South Florida, Tampa, Florida, USA

Ciguatera toxicity is a poisoning from consuming reef fish that had fed on dinoflagellates such as *Gambierdiscus toxicus* found along coral reefs. The toxin is oil soluble, odorless, colorless, tasteless, heat stable, and is concentrated in larger carnivorous fish such as amberjack, barracuda, eel, grouper, red snapper, sea bass, and Spanish mackerel. Onset of symptoms is usually within 6–12 hours after ingestion. Gastrointestinal symptoms lasting 1–2 days include abdominal pain, nausea, vomiting, and diarrhea. Neurological symptoms may persist for weeks or several months or—rarely—years and include circumoral and extremity paresthesias, temperature sensation reversal, itching, weakness, ataxia, and others. A patient with burning hands and feet who had not found relief using other methods had diagnosis of ciguatera toxicity assisted by hypnotically refreshed memory followed by rapid relief with hypnotic suggestions in 1 session and remained free of symptoms.

Keywords: ciguatera, hypnosis, toxicity

Ciguatera toxicity is the most common foodborne illness resulting from fish consumption (Fleming, Blythe, & Baden, 1997). It occurs after human ingestion of large carnivorous fish—associated with warm water coral reef—that have concentrated ciguateratoxin by eating smaller herbivorous fish that have, in turn, ingested certain dinoflagellates. These are specific marine algae in the plankton, most commonly *Gambierdiscus toxicus*, which grow in proximity to the coral reef environment. The term for the toxicity is probably derived from cigua, a Spanish word borrowed from the Taino natives for a sea snail, *Cittarium* (*Livonia*) *pica*, a common edible turban or top-shaped speckled shell marine snail of the Caribbean (Auerbach, 1985), which perhaps was associated earlier with this illness or with a similar illness produced by "red tide." The ciguatera toxin is oil soluble, odorless, colorless, tasteless, heat stable, and concentrated in larger carnivorous marine fish such as amberjack, barracuda, eel, grouper, red snapper, sea bass,

Address correspondence to Philip D. Shenefelt, Department of Dermatology and Cutaneous Surgery, MDC 079, College of Medicine, University of South Florida, 12901 Bruce B. Downs Boulevard, Tampa, FL 33612, USA. E-mail: pshenefe@health.usf.edu

and Spanish mackerel. Onset of symptoms is usually within 6–12 hours after ingestion. Gastrointestinal symptoms lasting 1–2 days include intense abdominal pain, nausea, vomiting, and diarrhea. Neurological symptoms may persist for weeks or several months or—rarely—years and include circumoral and extremity paresthesias, temperature sensation reversal, itching, weakness, ataxia, and others. With the temperature sensation reversal, something cold can feel hot and vice versa. In some cases cardiotoxicity may also occur (Friedman et al., 2008). Unless the clinician is familiar with ciguatera toxicity, the peculiar symptoms can remain a diagnostic puzzle. A key question to ask is whether the person has eaten any of the aforementioned fishes. Cooking does not destroy the toxin, and there is no warning off taste or odor to the toxin-containing fish. The toxin has been reported to be transferrable with intimate sexual contact and in breast milk (Wang, 2008). Another dinoflagellate toxin produced by the reddish brown algal bloom called "red tide" favored by warmer weather often results in fish kill and the injunction not to eat marine shellfish in North America except those harvested in a month containing an "r"; in other words, avoiding the spring and summer months of May, June, July, and August. This form of shellfish poisoning is also caused by heat stable toxins that can result in paresthesias and in some cases diarrhea. Shellfish poisoning can be in the differential diagnosis of ciguatera poisoning. Red tide brevetoxins can also become aerosolized in the surf and cause rhinorrhea, conjunctivitis, bronchospasm, and cough in individuals exposed at or near the beach (Wang, 2008).

Conventional treatments beyond supportive care generally are of little benefit. Supportive hydration may be required for the vomiting and diarrhea, which usually lasts 1–2 days. For the neurologic symptoms, the osmotic diuretic mannitol has been used with case reports of most effectiveness if used soon after exposure, but a prospective controlled study found no difference between mannitol and normal saline in the treatment of ciguatera toxicity (Friedman et al., 2008). Amitriptyline 25–50 mg orally twice daily (adult dose) has been reported to relieve pruritus and dysesthesias in some patients and may act by blocking fast sodium channels that have been activated by the ciguateratoxin. Analgesics such as acetaminophen for headache and antihistamines such as diphenhydramine for pruritus may offer some symptomatic relief. The neurological symptoms generally resolve spontaneously after a few weeks, a few months, or rarely after years of symptoms. Cardiotoxicity may require support for bradycardia or hypotension for a few days (Friedman et al., 2008).

Case History

A 65-year-old Caucasian male patient was seen by one of us (E. D. L.) requesting hypnosis for help with constant burning and itching of palms and soles. He could not sleep and stood in a tub of cold water and ice most of the night and was exhausted. He had seen an internist, a dermatologist, an infectious disease doctor, and a neurologist in the Chicago area without diagnosis or relief. He could barely work, walked without shoes on

the golf course, and was in constant discomfort. He described the sensation to be similar to an electric current in the soles. The patient was convinced that a scorpion had stung him. On further questioning he had been in the Dominican Republic and had eaten at a five-star hotel restaurant with ensuing violent diarrhea. Soon after this, his palms and soles began to have severe burning. He went to the local hospital but received no relief. He could not recall what he had eaten.

Description of Treatment

After trance induction, E. D. L. asked him to go to a place where he felt safe, happy, and comfortable. He went to his summer home, sat on the porch, and watched the sunset. This was a good scenario to utilize for deepening. As the sun went down, so did he, into a deep level of trance. He was then regressed to the time just before the diarrhea occurred. He was in the hotel restaurant, seated at the table, looking at the menu and deciding what to order. He was instructed to look at the menu, study the list of foods, and prepare to point to the food he ordered. The patient was told that perhaps the dish will come to mind, maybe now or in a few moments. Suddenly he said, "It's this" and pointed to the grouper. At that moment, E. D. L. knew from past experience with another patient what the diagnosis was. It was ciguatera fish poisoning.

Three types of suggestions were then given to the patient. One suggestion was based on Dr. Ewin's suggestions for burns (Ewin, 1992). After the patient removed his shoes and socks, two cold packs from the freezer were placed on the bottoms of his feet and E. D. L. said, "From now on, your feet and hands will feel cool and comfortable. You will be able to sleep in comfort, and all the burning will float down and away with the sunset into the universe. Let it be impossible for you to feel any further discomfort." For the second suggestion, E. D. L. then backtracked to the initiating dinner to change the original perception, something she learned from Dr. Cheek. He was instructed to order a different meal, not fish. This suggestion was repeated several times to intensify through repetition and fix in place the reframed memory. For the third suggestion E. D. L. used a Chi Institute Infratonic 8000 device with random very low frequency sound in the alpha brainwave range of 8–13 Hz on his feet and later near his feet along with the metaphor that "some things set well, like the sunset, and then again, other things do not set that well." The latter implied that the original tainted fish meal did not set well.

Results

The patient reported the next day that he had slept through the night. If he started to awaken, he imagined going to the porch and watching the sun set. He called E. D. L. "Kojak" the detective. His palm and sole discomfort were minimal and resolved with the repeated use of self-hypnosis to produce cool comfortable hands and feet. He needed no

further follow-up and reported full resolution of his symptoms after 6–8 months. Many other reported cases have had discomfort for years.

Discussion

This case illustrates the usefulness of recovery in trance of recall of specific memory details, in this instance the restaurant menu item chosen, which permitted the diagnosis to be established on the basis of the type of fish consumed, the pattern of severe diarrhea followed by intense burning of hands and feet, and E. D. L.'s past familiarity with this condition. Ciguatera toxicity is often undiagnosed or misdiagnosed as had occurred in this patient before his seeking out hypnosis. Specifically, this illustrates the effectiveness of the three pronged approach using a combination of (a) physical experience (cold packs, Infratonic device); (b) imagery of hands and feet feeling cool and comfortable; and (c) reexperiencing the restaurant meal with a different, nonfish menu item. For the latter, it presented a metaphor of a sunset, originally brought forth by the patient, representing that some things set well (the sunset) while others do not set that well (i.e., the toxic fish meal). Because other treatments are primarily supportive and often have little effect on the neurological paresthesias of ciguatera toxicity, hypnotic suggestions may offer more relief to some individuals than medications do.

While a strict causal relationship between relief and hypnosis has not been established in this observed case, the authors have inferred that the cold packs and Infratonic device offered only the slightest temporary relief from the symptoms. The cold packs had produced only temporary relief in past attempts by the patient to alleviate the burning pain. In the authors' experiences with Infratonic devices repeated treatments have been necessary to promote resolution and lasting relief for problems such as sore muscles. The patient continued to obtain relief and restful sleep using self-hypnosis imagining coolness and comfort as the dramatically lessened symptoms continued to resolve and fully resolved after 6–8 months. The authors believe that the suggestion in hypnosis for reexperiencing the meal (but eating a different nonfish item) and the suggestion for a sunset as an endpoint for the symptoms were the factors that likely contributed to the resultant resolution of the symptoms. Further study in similar cases could help to confirm or refute this observation. In addition, hypnosis played a key role in the initial diagnosis of the condition by permitting the patient to remember when regressed to the vacation meal visualizing the menu that it was the grouper that he had eaten, thus permitting the accurate diagnosis of the ciguateratoxin poisoning.

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