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EFFECTIVE BEHAVIOR THERAPY IN A MEDICAL CRISIS: A CASE REPORT

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Abstract. This is report of the successful use of behavioral treatment in a medical crisis. The intubation process inadvertently punctured a patient's throat during the application of general anesthesia while having a routine arthroscopy. This resulted in a rapidly spreading infection, spiking temperature and dehydration. To locate the puncture, a barium swallow x-ray was necessary, but the patient's weakened condition made standing impossible. A friend and experienced therapist accompanying the patient helped him stand for the several minutes necessary to complete the barium swallow by countering the hypotensive state with angry imagery to stimulate an adrenalin surge. Several principles of effective therapeutic practice were demonstrated by this case, including the importance of the alliance, of technical eclecticism, of engaging the patient in the treatment process, and therapist experience.

Keywords: Behavior therapy, medical crisis, adrenalin response, therapist characteristics.

Introduction

Behavior therapy has a long history of being effective when administered by skilled practitioners to motivated patients with a problem to be overcome. With behavioral treatment they can take a flight they've always avoided or ride the elevator to the 50th floor; they can give blood, pass tests, speak up when the situation demands it, break through a writing block, control an explosive temper, and discipline their habits. Rarely, however, has behavior therapy been called upon to intervene in a medical crisis. In fact, to our knowledge, nothing has been published on this particular application of behavior therapy to medical emergency.

The medical crisis

One October about a decade ago, one of us (DHP) went into a large Boston teaching hospital to have arthroscopic surgery on his right knee. He was driven to and from the operation by

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his friend of many years, CLB, and accompanied by his spouse (VSP). The surgeon liked to have his patient unconscious during the procedure. The anesthesiologist told the patient that he would be intubated during the surgery to prevent potentially hazardous reflux. He was then warned that he might experience a little discomfort in the throat when he woke up because of the tube rubbing against the inside of his windpipe when it was inserted and withdrawn.

In fact, when the patient awoke he did feel discomfort in his throat, which he attributed to the intubation. On the way home a few hours later the patient began to have increasing difficulty swallowing. The pain in his throat increased. By late afternoon the pain was nearly unbearable, and he had a temperature of 103. The surgeon was called, and all agreed that the patient should be brought back to the hospital immediately.

The patient was rushed to the emergency room of the same Boston hospital. There the patient's condition rapidly deteriorated. As the infection spread, his fever continued to rise. Pain made swallowing impossible and because he had not been able drink anything for 24 hours, he was becoming more and more dehydrated. Soon he was unable to stand or sit up. He was in and out of awareness.

Heavy doses of antibiotics were given to no avail. The ER doctors theorized that the infection causing the high temperature was caused by the intubation. The tube must have punctured the patient's esophagus somewhere between the top of his throat and the stomach. In order to save the patient's life surgery was necessary to repair the puncture. But first the hole had to be located. To find the puncture the chief resident ordered a diagnostic technique, called a barium x-ray swallow. This procedure requires that the patient stand, drink a few ounces of a barium compound and then remain upright while being x-rayed continuously for about 3 minutes as the barium makes its way down the esophagus. The barium would migrate into the hole in the throat. This procedure would show definitively whether – and more importantly, where – the esophagus had been penetrated. For the procedure to work, the patient had to be able to stay in a vertical position for the several minutes it took for the x-ray to track the substance's path down the esophagus. There was no other way to do it.

Unfortunately, the patient couldn't stand. The first time the procedure was tried he pulled himself upright to swallow the barium but remained erect for only a few seconds before collapsing. Because of the way the equipment worked it was impossible for someone or something to hold him up for the few minutes required to carry out the x-ray process. The radiology technicians were frustrated because they had no idea how carry out the procedure when the patient couldn't stay on his feet. The physicians were also upset because the patient's condition was worsening and they needed to act soon. Unless, however, they knew precisely where the puncture was they would have to open the patient's chest from top to bottom to expose the esophagus in search of the leak. The barium swallow x-ray was the only way to prevent far more extensive and riskier surgery; the problem was how they could carry out this crucial diagnostic procedure if the patient could not remain upright for a long enough period ?

The behavior therapy intervention

While the medical team was still puzzling what to do, CLB intervened. He convinced the physicians that he could help keep the patient upright long enough for the barium swallow x-ray to work. Reluctantly, they agreed to his suggestion that they try the procedure one more time. CLB went into the x-ray room with the patient. At first he hoped that his presence and encouragement would be enough to help the patient to remain upright for the required

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3 minutes, but the patient did not have the strength to do so. Something else was needed in this medical crisis.

At that critical moment CLB had an inspiration: counter the hypotensive state by using angry imagery to stimulate the flow of adrenalin. The adrenalin might just raise the patient's heart rate and blood pressure sufficiently to enable him to remain on his feet long enough for the barium swallow x-ray to work. He recommended to the patient that they give this a try. The patient agreed. He found that he had no trouble becoming angry: he had been perfectly healthy that morning when he arrived at the hospital, except for a slightly gimpy knee. Now, as nearly as his foggy mind could comprehend, after a few hours in this Boston teaching hospital, he was very sick, getting sicker, and was about to have his chest cracked open. A powerful surge of anger immediately energized him. The patient found that he could swallow the barium and then stand unassisted for the several minutes necessary to complete the x-ray.

The barium x-ray showed the exact location of the perforation in the esophagus. The Chief of Thoracic Surgery at the hospital repaired the puncture at two minutes before midnight. The esophageal puncture was sealed and the patient recovered.

Discussion

Rarely are clinicians called upon to apply their behavior therapy skills to patients in a medical crisis. Even rarer is someone in dire need of a particular form of behavior therapy who is lucky enough to be accompanied by a friend and clinician who happens to know how to find a way to help. Yet after one acknowledges the good fortune of the patient to have access to a therapist with the necessary skills at a critical moment, there seem to be several solid principles about the successful application of behavior therapy in less acute situations, which have been articulated by others over the last dozen years, that are demonstrated by this event. They seem worth restating.

First, a strong therapeutic alliance sets the stage for this successful behavioral intervention. Well established is the finding that a sound therapeutic alliance contributes heavily to positive outcomes in therapy for a variety of conditions conducted by clinicians of differing theoretical persuasions (Grencavage & Norcross, 1990; Krupnick et al., 1996). Effective therapy occurs in a relationship where there is mutual respect and trust. Though this was a friendship and not a formal "doctor-patient" connection, the patient respected and trusted the therapist's knowledge and clinical judgment. By the same token, the therapist knew the patient well enough to know that he was aware of the value of creating an adrenalin response, and, with his temperament, would not have trouble generating the necessary anger.

Second, this case illustrates the value of technical eclecticism, which is the selection of the most efficient techniques that may be drawn from a number of theoretical origins in order to achieve optimal results for a particular patient's symptom (Lampropoulos, 2002). Because of his multi-modal interests and competencies (Birk, 2000; Birk & Brinkley-Birk, 1974) the therapist was able to think quickly of an intervention that might help the patient remain standing in spite of his hypotensive, dehydrated state. He was aware that an anger-evoking scenario would create a "fight-flight" response (Cannon, 1929; Selye, 1956), which would arouse the sympathetic nervous system to secrete adrenalin that would increase heart rate and blood pressure. Also, the catecholamines stimulate glucose consumption and facilitate muscular activity (Dienstbier, 1989). This made it possible to stand for the time necessary to complete the barium swallow x-ray.

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Finally, experience matters in complicated, urgent clinical situations (Huppert et al., 2001; Burns & Nolen-Hoeksema, 1992). Veteran therapists have been shown not only to draw from their accumulated experience, but also to enjoy engaging complex, unfamiliar problems. This may allow them to consider a wider variety of treatment options when something different needs to be done immediately to help a patient (Jennings & Skovholt, 1999). In this case, no one in the ER knew what to do to help the patient stand. The patient, who was knowledgeable about the value of the fight-flight response to stimulate an adrenalin response (Babcock & Powell, 1982), could not help himself. But once the therapist directed his attention to this approach, the patient was able understand its potential value and apply the technique successfully.

The patient was fortunate to have with him a seasoned psychiatrist, who had the "inspiration" of applying a form of behavior therapy to a serious medical condition in a manner that had never been previously described. Though the patient's falling pulse rate and blood pressure were due to infection and dehydration rather than anxiety, he was obviously hypotensive. At that critical moment the clinician was able to imagine the possibility that stimulating an adrenalin surge by anger-provoking images would combat this condition, just as it might with a needle phobic. No one knows from where exactly the inspiration came but it is a good bet that its origins lie somewhere in his accumulated training in physiology and medicine, in his research and writing on the applications of behavior therapy, and/or his long clinical and life experiences.

We can only speculate as to whether the same outcome would have occurred if a hospital therapist with similar skills and experience had materialized in the ER that night and made the very same recommendations. It is tempting to argue that the same positive result might have been unlikely within such a brief period without the pre-existing relationship. On the other hand, behavior therapists on occasion administer treatment in emergency settings to patients they do not know. An example is a college student coming to the ER with clinical signs of acute appendicitis, and also with a severe needle phobia that made it impossible to draw blood. Since blood work was necessary before the surgery could be done, a behavior therapist was called in. Meeting the patient for the first time in the ER, the therapist quickly determined that the patient appreciated that blood needed to be taken, but was terrified of needles. The adrenalin response to combat the phobia was explained and practiced. Within 20 minutes the patient was able to have the blood drawn to confirm the diagnosis (Babcock & Powell, 1982).

This case provides a useful reminder about the linkage of emotion and the autonomic nervous system, even under dire physical circumstances. Here was a patient with sepsis, severe dehydration, and orthostatic hypotension, whose anger could be mobilized to allow him to stand for a critical medical test. Such behavioral interventions that utilize or control emotional responses for diagnosis and treatment are not commonly used in medical practice. This case may illustrate the value for clinicians of developing an armamentarium of behavioral interventions for potential application in crises and everyday practice.

In a busy clinical practice we sometimes take for granted the very powerful effects of behavior therapy, or perhaps any type of therapy, because we have used them so often and we are so accustomed to seeing their successful outcomes when applied by an empathic and skillful therapist. We routinely witness people overcome problems that, until they worked with us, had severely limited their lives and potentially compromised their future. Rarely, however, do we experience the benefit of these techniques first hand, and even more rarely do we appreciate their value in a medical crisis.

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