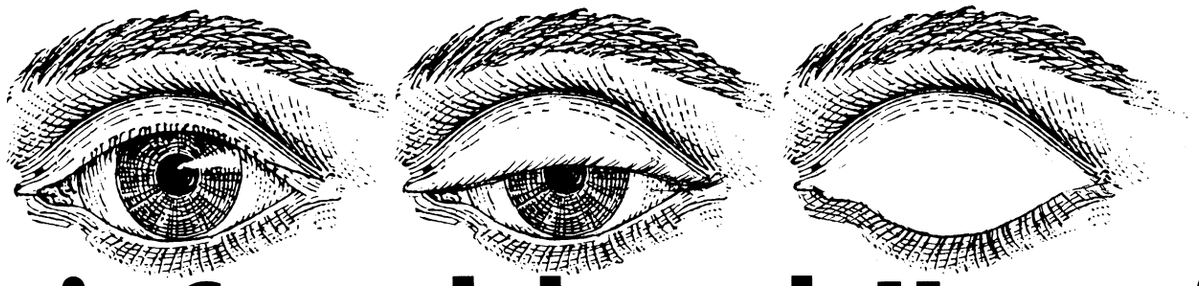

Pain Control through Hypnosis

Physicians and hypnotherapists have called a begrudged truce as hypnosis is honed as a valuable tool in pain control

BY MICHELLE GALLER RIEGEL

Pain—there are five definitions of it in Webster's New Collegiate. The Third International devotes an entire column of its 8 × 11 inch self to trying to elucidate pain's infinite variables. Each person alive could write his or her own version of pain, a chapter's worth or a bookful, and have it be different from the next but for a common denominator—no one wants to suffer pain.

Because the perception of pain is so ultimately personal and, at the same time, such a universally human syndrome, the treatment of pain has always been an arduous and indelible problem for physicians. First, there has been the need to explain it, to distinguish between the emotional, psychic side of pain, long viewed as illegitimate pain, and the physical aspect, legitimate pain. But the fact is that current thinking deems these two pain classifications over-simplified. Especially since it has been demonstrated that a person's subjective pain experience is not perfectly correlated with the extent of the physical malady. There are numerous psychological factors—anxiety, anticipation, attention—that can either exaggerate or subdue the sensation of pain. Research shows, for example, that when certain nerves are severed in the cerebral pain centers, pain, in many cases, is still perceived.

So, the doctors, in their desire to remove the monkey from the patients' backs by attempting to relieve their pain, many times may substitute another monkey in another form. Anesthetics, narcotics, psychotropic drugs, neurosurgery, all exist as salves for pain, but many a patient has become addicted to the barrage of opiates prescribed to ease his discomfort. Many others wind up with severe psychological traumas on having their bodies surgically mutilated. Because of the many unfortunate results seen with patients dependent on drugs or other external pain relievers, an increasing number of doctors treating pain patients are turning toward what they consider to be a more expeditious, less expensive, less addicting and less risky pain treatment—hypnotism.

Harold J. Wain, director of the Psychiatric Liaison Service at the Walter Reed Army Medical Center in Washington, is one of the doctors already using hypnosis as an alternative pain control treatment. He uses it as one of the major treatments at the center's pain clinic. And he had been using the procedure for about eight years, prior to introducing it into the scheme of things at the clinic close to four years ago. Initially scorned by two of his colleagues at the clinic, an anesthesiologist and a neurosurgeon, his procedure was met by outright skepticism by most of his medical counterparts at the facility. The skeptics were unbudgeable, especially because he was not originally called into the clinic as a hypnotherapist but rather as diagnostic consultant in the areas of the psychological and psychiatric aspects of pain. "They wanted me specifically for my diagnostic acumen, but one day they gave me a case that they had failed with using other medical techniques."

The case in point was one of a woman with a severe and persistent phlebitis condition; the doctors had used back stimulators and had performed several nerve blocks for pain control, but to no avail. She had been in and out of the hospital over a long period of time and was in extreme discomfort. "Initially," says Wain, "they would look at each other as if to ask, 'What is he doing in our pain clinic?' and there I was using the hypnotic procedure. And when it worked, they were flabbergasted." She was out of the hospital within a week, conquered the pain and went back to work. As more patients were able to cut down on medication, lessen extravagant medical expenditures and avoid surgery, only then did the use of hypnosis become accepted as an integral part of pain control treatment.

Wain is the first to acknowledge that hypnosis, and specifically hypnosis in the control of pain, is not a new concept. He points out that as early as 1840, James Esdaile in Calcutta used hypnosis to carry out major surgery, including painless leg amputations. What *is* peculiar is the role of hypnosis as a regular and major treatment at a modern, basically medical—as opposed to primarily psychiatric—treatment center. Hypnosis is used in more than 50 percent of the cases at the Walter Reed pain clinic; 20 percent of these are terminal illness cases. More physicians are referring patients to Wain for hypnotherapy than ever before, at times as an important adjunct to other psychotherapy. All of the psychiatric residents and the psychology interns now at the center are learning hypnosis as part of their regular training.

Wain sees a formidable increase in the amount of direct requests from physicians for hypnotic pain control for their patients. And now getting under way is a research project whose end goal is to validate the success of hypnosis as a mode of treatment *before* starting patients on drugs or surgical procedures. "What has happened now," says Wain, "is that the staff of the pain clinic is totally supportive—100 percent. There has been much more acceptance by the medical staff but there are some who still look at it as the occult."

He is understandably offended by attempts to mystify or sensationalize hypnosis. "I would like to see stage hypnosis outlawed," he says. "I end up spending much too much time reeducating people. . . ." The attitude that hypnosis is an entertainment done on stage has frightened many patients. This serves to put obstacles in the way of effective treatment—obstacles that must be overcome in order for hypnosis to help.

Although Wain sees the historical cold war between medical physicians and hypnotherapists winding down at his facility, Ethel C. Craven, counseling psychologist at the Veteran's Administration Hospital in Brooklyn still sees hypnotic pain con-

OFF THE BEAT

Kitt Peak: "The ground whereon thou standest . . ."

The Spaniards called them Papago, a name applied to them by their neighbors to the south in what is now the Mexican state of Sonora. They call themselves Tohono O-Otam, and they inhabit much of what is now southern Arizona. Their reservation ("larger than the state of Connecticut" you will be told) is second in size only to that of the Navajo among reservations in the United States.

Within an easy drive of the modern plastic-American, Anglo-Hispano city of Tucson are two quite different holy places of the Papago. One of them, San Xavier del Bac, is on the itinerary of Gray Line's city tour. It can be seen from a long way off, a striking white building in the dun-colored Sonoran desert ("the white dove of the desert" the guide will tell you it is called). Begun in 1697, it is the northernmost of the missions founded by the apostle of the region, the Jesuit Eusebio Kino. The present buildings date from the 1790s and are a striking example of what one would expect, the Spanish-Indian baroque-rococo of the period. The visitor is likely to find people at their prayers or saying a last goodbye to a departed friend.

Like every place on the tourist itinerary, San Xavier del Bac has a souvenir shop. The offerings are traditional religious momentos, some of them exquisite, others calculated to middle-American taste (jagged edged boards with "Bless this house . . .").

But the Papago taste is superior to that in some tourist shrines, which sell Virgin-Marys-in-a-snowstorm, and crucifixes guaranteed to glow in the dark.

In the records, the Papago are noted for their friendliness to the whites who came among them (they fought beside both Spaniards and Anglos against the Apache, who are regarded by everybody as the archetypical bad guys of the region) and their eagerness for the Gospel. Kino was continually pestering his superiors to send more missionaries.

Eagerness for the Gospel notwithstanding, there remains about 50 miles from Tucson another Papago shrine, home of an even older holiness, the two mountains, Kitt Peak and Boboquiviri. A Sonoran Indian, arguing with a Spanish missionary, is supposed to have told him that he was wasting his time because an entirely different god had made the Sonoran desert. After a couple of days, one begins to think he was right.

The two mountains are the home of the god I-I-toy, and that fact proved a serious complication when American astronomers decided that Kitt Peak was the ideal site for a National Observatory. The Papago were highly reluctant to lease the mountain to infidels for any purpose whatever, and convincing them was a long and delicate process. Part of the process was inviting tribal officials to the University of Arizona to take some looks at celestial objects through the telescope that the university then had. Viewing the moon, one old man remarked that its surface looked like parts of his reservation.

In the end, the Indians decided to lease the mountain to the people "with the long eyes." (It sounds like something out of Tonto, but it's their phrase.) That was 20 years ago. Today 21 telescopes inhabit the top of the mountain under the brooding guardianship of I-I-toy. One of the clauses in the agreement, as Kitt Peak's guide Joe Underwood, a retired Marine colonel, will tell you, is that all caves on Kitt Peak are held inviolate. I-I-toy can change himself into anything he likes, and when he takes up these manifestations, he likes to sleep in caves, so all the caves are sacrosanct to him.

The astronomers' part of the mountain is free for the public to visit during daylight hours. The access road is not particularly difficult, and the views from the top are superb. On a clear day Underwood will point out Ajo Peak, 100 miles to the west.

There is a visitor's center with an exhibit of astronomical photographs and a model of Kitt Peak's sister institution, Cerro Tololo in Chile. Here are sold another example of Papago taste, the baskets that are their most traditional craft work. Also, in quite a different vein, one can buy one's Kitt Peak National Observatory T-shirt.

Guided tours are given Saturdays, Sundays, and holidays at 10:30 a.m. and 1:30 p.m. and can be laid on for groups by request. Otherwise, casual visitors can view the two major pieces of equipment, the four-meter Mayall telescope and the McMath solar telescope. The four-meter's dome rises the equivalent of a 20-story building above one of the highest points of the mountain. Visitors can take the elevator to a glassed-in observation gallery for views of the countryside. A little higher they can enter the dome itself and see the telescope. Since the four-meter is now used in the daytime for infrared observations, the visitor may happen to come at a time when the dome is being rotated or the telescope pointed, both of which are thrills for many. A small gallery permits the visitor a look up and down the inside of the 500-foot shaft of the McMath telescope.

The visitor is also free to wander and imbibe the holiness of the place. People tend to react solemnly. There are places where sanctity is palpable in the air and the ground. Kitt Peak is one, San Xavier del Bac is another. Many pretentious ecclesiastical erections are not.

—Dietrick E. Thomsen

. . . Hypnosis

trol as being viewed with considerable ambivalence by the medical profession. "Overcoming institutional resistances," she explains, "implies that resistances are inevitably encountered, lines drawn, battles joined and victory snatched from hostile adversaries. Not precisely," she says. "We are compelled to interpret a variety of behaviors as resistance . . . even though we have not encountered any prohibitions against employing it [hypnotherapy] . . . no outright skepticism about its effectiveness, no lines drawn, no battles joined . . . there is resistance."

Nonetheless, she does see a slow, grudging acceptance of hypnotic pain control by the mere fact that qualified psychologists are using it as an effective tool in private practices and institutions and because ". . . psychology itself may have achieved respectability with the medical profession."

Hypnosis in pain therapy offers the patient more responsibility for his own fate, according to Wain. More so than with treatments that he knows little about and that happen outside of his range of control, such as drugs and surgery. "I explain to the patient that hypnosis is a capacity he has—a gift," he says. "The key is to develop an alliance with the patient." He also extends a caveat to professionals and patients alike that hypnosis is a "double-edged sword" and when administered by the untrained can present a reaction perhaps as dangerous as many drugs. It is the kind of process that quacks could and do thrive on.

Altered state of consciousness? "Yes," says Wain, in that "we all slip into altered states during the day—in daydreaming, say." He sees that elusive and intriguing phrase as having a wholly pragmatic and nonmystical meaning. "It's the ability to cut down on peripheral awareness and concentrate on a focal perspective," to be unaware of any outside activity besides the interaction between hypnotherapist and patient. "But," he adds, "there needn't be a formal trance state for a person to experience hypnosis. Sometimes psychotherapy is hypnotherapy but without the formal induction."

Despite the fact that hypnosis has shown a high rate of effectiveness in pain control and physicians are finding it harder to ignore, the mechanics of the process are less than exacting. Each administering hypnotherapist seems to have his own personal brand of prehypnotic preparation, induction and posthypnotic procedures. "It's pretty eclectic," says one staff psychologist at the VA hospital in Brooklyn, when asked to describe a typical session. "I use a little bit of everything."

All the patients referred to the Walter Reed clinic—most are referred by private psychiatrists and physicians, others come off the wards—are administered Spiegel's Hypnotic Induction Profile (HIP). Wain

uses this as a tool to screen pain patients and later on as a method to induce hypnosis. The two primary components of the HIP are the eye roll and arm levitation. Each is given a score from 0 to 4 and the average of the two is the profile score. An entire profile is complete when the patient has similar eye roll and arm levitation scores. Under some circumstances, only the eye roll is given. The patient is asked to roll the eyeballs up and look at the examiner's finger placed in the middle of the patient's forehead. The amount of white (schlera) showing as the patient closes the eyes is an effective statement of the person's receptivity to hypnotism. This test, used in conjunction with information derived from detailed, personal interviews with the patient, establishes what tactic will be used by the therapist in helping the patient to pain relief.

"Whether it's physical or psychosomatic pain," Wain says, "I can develop a strategy based on what the patient tells me about himself. He may tell me that he likes to go to church, or likes to sail boats. I may use this with him in therapy." Migraine headaches seem to be the condition most responsive to hypnotic suggestion. He has treated several patients in a relatively short time by suggesting that they imagine their heads feeling very cool and their hands becoming warm. Through repeated suggestions of various positive sensory projections many different types of pain are relieved or alleviated.

There is no moment of hesitation as to what he wants to achieve with each patient, besides the obvious control of their pain. "Helping them to develop techniques so that they can eventually help themselves . . . to make them dependent on themselves." Weaning the person from reliance on painkilling drugs makes for success as he sees it. "In time, I just change the prescription from medication to autohypnosis," he says, "and I might prescribe autosuggestion four times daily, for example . . .", depending on the case.

As in many areas of behavioral science, or the physical sciences for that matter, the reasons for success and data that satisfactorily substantiate the results are less than apparent. Perhaps the clinic's projected research will fill in the gaps. For now, Wain considers the clinicians to be far ahead of the laboratory researchers in understanding and collecting data and achieving results in hypnotic reduction of pain. There are far more psychological variables present in the clinics, since the pain is not simulated nor artificially induced, which can be learned from. But he does offer an insight into how many people actually find relief with hypnotic pain control. "Every patient gets the minimal amount of relief. If you give a person relaxation, pain will be decreased as well." Although every patient isn't able to get off all the medication, "quite a few have." □

. . . Inorganic Polymers

rimental quality, the susceptibility to formation of microcrystals. Polymeric molecules do not form crystals as a whole, but microcrystalline regions in a sample of homopolymer can crosslink adjacent strands, and these microcrystalline regions degrade the polymer's stretchability. Microcrystallization can be avoided by substituting more than one kind of chemical group for the chlorines that bind to the polyphosphazene backbone. This reduces the possibility of crosslinks because it is likely to put different chemical groups adjacent to each other. Techniques for this multiple substitution have been developed, and they produce extremely rubbery substances.

Of all the possible uses for polyphosphazene polymers, Allcock seems keenest about the biomedical developments. Many of these polymers are extremely hydrophobic—resistant to wetting by water. This makes them especially appropriate for use in artificial organs since they do not interfere with the physiological chemistry going on around them nor do they initiate unwanted reactions such as blood clotting.

More exotic is the possible use of polyphosphazene polymers as carriers for therapeutic agents. For example, it has been shown that square planar platinum complexes are powerful anticancer drugs. But they are small molecules and therefore rapidly excreted through the kidneys. Some of the polyphosphazenes are soluble in water (though not reactant with it). If the platinum compounds could be bound to these big, but not physiologically active molecules, they might stay in the body long enough to do some good.

Nature seems to do just this sort of thing. Many large proteins seem to serve mainly as carriers for metal atoms. The metals do the real physiochemical work, and the proteins seem to be there mainly to retard excretion of the metals or to prevent metal atoms from getting too close to each other to do their job. Hemoglobin seems a good example of this. It is the iron atoms in the hemoglobin that bind the oxygen and carry it around. The rest of this large and complicated protein seems to serve mainly as a carrier for the iron. Some polyphosphazenes could serve as artificial performers of this sort of function, and they may be useful in fundamental studies of the physiological activities of such proteins.

So it seems that we are on the way to a second polymer revolution. It appears to be one that is likely to provide as many wonders as the first, and its products may find their way into our bodies in functions where organic polymers, by the irony of their own organic nature, cannot properly serve. □