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Place of hypnosis in modern medicine

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THE PLACE OF HYPNOSIS IN MODERN MEDICINE

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I. INTRODUCTION

The relative merits of medical hypnosis as an effective armamentarium in the practice of modern medicine is currently an issue of diverse opinion and significant importance. Although the application of hypnosis toward the relief of human suffering has been recorded for many hundreds of years, it has only been within the last decade that a formal scientific exploration into its usage has been made.

The phenomenon of hypnosis is an acknowledged reality and fact that cannot be ignored by the medical profession. Not only is the current medical literature abounding in testimonials as to the therapeutic effectiveness of this procedure (as well as its condemnation), but the lay public have been alerted to its existence. Thus, public demand alone is setting the precedent which obligates every physician to acquaint himself with the possibilities of medical hypnosis.

For as many centuries as its history records, the medical profession has thrived, to the greatness it enjoys today, on the nutrient of every new meritable idea and concept that has come its way. By constantly being on a vigilance toward new and better methods in combating the maladies of man, the medical world has brought an end to: the mass mortality of the plagues; the high incidence of maternal deaths in childbirth; the futility in controlling bacterial infections and the horror of undergoing surgery without anesthesia.

It is the intention and hope of this thesis that through the general scanning of medical hypnosis so presented, an alertness toward the great potentialities of this barely-tapped source of therapy and diagnosis may be established.

II. HISTORY OF HYPNOSIS

To portray the historical picture of hypnosis and its therapeutic application, one must look back in time nearly 4000 years to the ancient priests of Egypt. Here, as found in such records as the famous Ebers Papyrus, is mention of the laying of the priest's hands upon those seeking relief from their ills, in order to induce the "sacred sleep."

However, it was not until the 18th century that any detailed recordings of the phenomenon, now known as hypnosis, were laid down. In 1778, Franz Anton Mesmer, inspired by the healing demonstrations of a Father Gossner, began his practice of hypnotic suggestion. Mesmer treated his patients by what he called magnetism, in which he radiated out his power, either by making motions in front of his patients or by holding an iron handle leading to a large tub of iron that he had previously magnetized. His patients were usually thrown into a convulsive state, after which they were either cured or at least felt better.(16) Though his practice in Paris was successful, it ended abruptly in 1784 as the result of an unfavorable report toward his methods, which was handed down by a special investigating committee appointed by Louis XVI.

Following Mesmer, his students, known as magnetizors, developed the idea of imposing their will upon the subject. And one of these men, the

Marquis de Puysegur, first discovered that the patient could be put to sleep, rather than convulsed, through the act of making passes over them.

In 1841 a Manchester surgeon, James Braid, attended a magnetizer demonstration with the intention of exposing it. Instead, he became an adept student and was not only credited with coining the word hypnosis (after the Greek goddess of sleep), but also discovered a method of inducing the trance state by having the subject stare with a fixed intensity at some bright object.

By this time various schools of hypnotism were spreading throughout the European continent. In 1829 Jules Cloquet reported the successful surgical removal of a woman's breast utilizing hypnotic anesthesia. Even more impressive was the report of James Esdaile, who, in 1846, returned to Breat Britain from India to record his eye witness account of the successful use of hypnosis, as the sole anesthetic, for 300 major and several thousand minor surgical procedures.

Charles Poyen, another French student of magnetism, first brought the procedure to America. It was here that he influenced numerous physicians through his lectures on magnetism, including a fellow teacher, B. F. Bugard, who performed the first hypnotic anesthesia in the United States in 1836 for a tooth extraction. The following year another of Poyen's followers, a Dr. C. Cutter, attended a woman who had been in irregular and stressful labor for 48 hours, and through hypnosis he induced sleep in one minute, after which she went on to deliver with ease.

Poyen, for his efforts, was bitterly chastised by the Boston press, and left America a disheartened man in 1838. However, in the four years that he was in America, he was credited with influencing at least forty people to use his methods medically. In so doing, these people went on to record successful use of hypnosis in obstetrics, amputations, dental extractions, psychosomatic disorders and numerous other procedures. The seed was now sown.

The first gleam of official medical recognition of hypnosis was under the guise of an article in the October 27, 1888 J.A.M.A.,(1) which ascribed various rules to follow in the use of hypnosis, including: never hypnotize without the patient's formal consent; always hypnotize in the presence of a third person; never give a suggestion other than for the patient's happiness and health; and lastly, the use of hypnosis should be confined exclusively to the medical profession.

Thus, medical hypnosis saw a formal beginning in the 19th century and enjoyed much popularity until Freud, who failed it its use, changed the focus of attention to psychoanalysis. With this event, hypnosis was veiled into a relative obscurity until its current upsurge of popularity sprang into being within the last ten years.

III. THE PHENOMENON AND APPLICATION OF HYPNOSIS

The phenomenon of hypnosis, as yet,has not been fully explained, but it is generally defined as "a state of heightened suggestibility

"following an established rapport, through mechanisms not as yet fully understood, the patient is assumed to put himself in a condition resembling sleep."(24) Suggestion, then, is the primary psychological mechanism through which hypnotic induction is induced and is the one constant feature seen in any hypnotic state.

In responding to a conscious command or request, a person acts volitionally, but not so in his response to suggestion. Suggestion is rather a process that determines the uncritical acceptance of an idea. Any person who has ever been subjected to modern advertising or salesmanship has been, in one way or another, affected by suggestion in the same way that it is integrated into the hypnotic state.

The acceptance of suggestion,(16) as used by the medical hypnotist, is aided considerably by such factors as: an affective relationship of the suggestor; a therapist who is held in prestige by the patient; a technique by which the gradation of suggestion are presented from the easier and logical ones, gradually to the more difficult and a relaxed attitude of the patient.

Once the process of suggestion is initiated, the therapist should never utilize methods of persuasion in that, in so doing, the intellectual and critical functions of the patient's mind are alerted, and the dooming factor of doubt is created. Once the therapist's suggestions are readily accepted, the patient is in a state of increased suggestibility or hypnosis; and he is able to accept more difficult suggestions, thus slipping into a deeper state of hypnosis.

There is considerable diversity of opinion as to what type of people make the best subjects for hypnosis. For suggestibility is highly variable, in that some people may be hypnotized by one therapist but remain resistive to another using the same technique. Or one group of people may be responsive to one form of suggestion while totally resistive to another form.

This definite variability has been thought to be related to the cultural background, education and sophistication of the patient. However, if the therapist is aware of these character differences when approaching a patient, and modifies his type of suggestion to fit each individual, his success in reducing this variability to a more uniform group of suggestible patients will be soon noted. Thus, to achieve an optimum degree of success in hypnosis, the therapist must be flexible both in his approach and technique, depending on the personality of the patient.

Various secondary phenomena have been seen to be asscciated with hypnosis as illustrated historically by: the convulsions of Mesmer's patients; the sleep state of Braid's patients; and the hysterical behavior manifested by Charcot's patients. To somewhat clarify this situation, a few of the more examplatory secondary states of hypnosis as noted by Meares (16) will be briefly discussed:

a. Hypnotic sleep is a condition showing all the salient features of sleep, except that the subject is indirect with the therapist, communicates with him and accepts his suggestions. EEG findings in this state are the same found in a waking, conscious subject.

b. Amnesia is a factor that may be absent, sketchy or complete, and is thought to be a form of defense mechanism under hypnosis.

c. Hysteroid behavior is not suggested to the patient, but results from the hypnotic state itself as a psychological defense or pattern of behavior that is favored under certain circumstances.

d. Unconscious imitation is a phenomenon in which the hypnotized subject tends to act in a way he believes a hypnotized person should act. This behavior is influenced considerably by his cultural and educational background.

e. Hallucinatory phenomena may result spontaneously or as a result of suggestion, and is thought to be associated with regression and recall of repressed material.

f. Post hypnotic suggestion is an unexplainable situation by which the person under hypnosis is given a suggestion, which he carries out, as directed, sometime after recovery from the hypnotic state. This can be applied to almost any thought, act or pattern of behavior.

The induction of hypnosis is largely a matter of technique and, as such, is rather easily learned. It is merely the first step in hypnosis and is actually produced by the subject himself through his own conviction that hypnosis will occur. However, there are various rudimentary rules and fundamentals that must first be carefully studied and adhered to, before attempting the initial step in hypnosis.

According to Krager, (12) although there are a wide variety of induction techniques, they all employ ideomotor and ideosensory activities

which produce a favorable attitude based on belief, confidence and expectation catalyzed by the subject's imagination.

Regardless of the technique used, the sensory input and conscious awareness must be limited to the suggestions of the therapist. Group hypnotherapy is usually the preferred method, both from a practical point in regard to the saving of time and, even more so, because those who fall easily and readily into the hypnotic state stimulate others, less suggestible to a cooperative attitude and identification.

Kroger goes on to channel the multiplicity of hypnotic induction techniques into three broad categories: direct, indirect and mechanical methods:

a. Direct Method: All forms of induction in this category depend on eye fixation resulting in the fatigue and relaxation of various muscle groups. Since hypnosis is cumulative, the small muscles, such as those of the eyelid, are suggested into relaxation first, and the larger muscles are worked up to gradually. With such methods the therapist can start by having the subject stare at an object until his lids become heavy and close. Or he can initially have the subject close his eyes and suggest that his lids are becoming so heavy and relaxed that it is impossible to open them.

b. Indirect Method: Here, one makes use of visual, sensory imagery in such standard procedures as the television screen or escalator techniques. The former method is done by suggesting a particular television program in the mind's eye and then utilizing it for hallucinatory material. This enjoys most success in children, owing to their vivid imagination.

Also included in this group are the hidden techniques, which achieve relaxation through such misdirections as taking the subject's blood pressure. On releasing the cuff pressure, the therapist suggests to the patient that, as he feels his blood pressure drop, he will become more and more relaxed. These indirect methods require more active participation of the subject than the direct methods in which the therapist does all the work.

c. Mechanical Method: In utilizing this technique, one employs various mechanical devices to produce repititive visual, auditory or tactile stimuli. Such methods as the classical whirling coin or the metronome are typical of this group. Recently an electronic instrument, known as the brain wave syrchronizer, has come into use. This, coupled with a standard verbilization technique, induces various levels of hypnosis, possibly by photic stimulation of the brain waves. Such a device, through its potential as a standard, objective method of induction, shows great promise in the field of medical hypnosis.

An introduction of some of the fundamental rules for the successful induction of hypnosis, referred to earlier, should now be mentioned. First, the hypnotist must establish rapport with the patient. Through primary instructions, as to what is to be done and expected, he instills in the patient an assurance of the absolute safety in hypnosis, as well as complete confidence in his ability to conduct it.

The patient should then be made comfortable, and all sensory stimuli, aside from that evoked by the hypnotist, should be eliminated.

In initial induction the monotonous and repititive stressing of words, such as "heavy" and "relaxed", will narrow the field of awareness, so that the subject's ability to concentrate is increased.

One must always follow a trend of positive conditioning in which, once any of the earlier signs of hypnosis are noted, the therapist should call attention to them and add suggestions of encouragement. Also following the initial session of hypnosis, regardless of results attained, the hypnotist must always encourage the patient, and tell him he did well. Never should the therapist denote any signs of failure in induction or reprimand the patient for lack of cooperation. This not only lessens the patient's confidence in his therapist, but causes apprehension, which makes any future attempt at hypnosis much more difficult.

Finally, it is of extreme importance that the hypnotist be able to recognize certain signs of the different stages of hypnosis, so that he may use each manifestation to reinforce the subject's expectation and belief that hypnosis will occur. Also, since the various therapeutic applications achieved under medical hypnosis depend on the state of hypnosis acquired, the physician must recognize the particular state that is necessary to successfully initiate whatever mode of therapy he has intended.

Although there is no conformity of opinions regarding a standard classification of the stages of hypnosis, the following seems to be commonly accepted: hypnoidal state, light trance, medium trance and deep or somnambulistic trance. The first two stages are regarded merely

as degrees of relaxation, the hypnoidal state being the lightest. The light trance is the state of being fully relaxed, on the brink of dissociation and usually recognized by the initiation of lid lag.

Significant and specific signs of the medium trance state (12) are: limb catelepsy, ease of lid lag or closure, inability to open eyes after closure, trembling and twitching of eye lids and a moderate degree of muscle relaxation. Localized anesthesia and post-hypnotic suggestion may both be applied in this state.

The deep or somnambulistic trance is recognized by: immobility of facial features, staring eyes, loss of startle reflex, slow slurring speech, catelepsy of large muscle groups, economy of motion and a time lag between suggestion and response.

Having once attained a successful response to hypnosis, through the utilization of post-hypnotic suggestion, the patient can be easily and instantly dissociated back into the hypnotic state on any future occasion so desired. Usually the physician limits this re-entry response to occur under his influence only, by such specific post-hypnotic suggestions as a mere click of the fingers, written words, or even a phone call.

Therefore, through this secondary phenomenon of hypnosis, the physician can re-establish any state of hypnosis needed with prompt efficiency. By so doing, he can strengthen the form of therapy that had been initially undertaken, or he can establish some new form of treatment if he wishes.

IV. CURRENT USE IN THE FIELD OF OBSTETRICS

The field currently receiving most prominence, in regard to its use of hypnosis, is obstetrics. Since Queen Victoria of England first made obstetrical anesthesia fashionable in 1843, physicians have constantly strived to improve their methods toward the institution of painless delivery. Hypnotic analgesia or anesthesia is one of the latest means to undergo clinical trial in order to ascertain its effectiveness toward that end.

To best illustrate the value of this technique in obstetrics and the preparation needed for its successful use, one must observe the results of those who have used it rather extensively. The following facts are reported by Callen (8) who, since 1957, claims to have delivered about 80 per cent of his maternity cases using hypnosis as a total or partial anesthesia; although only 10 per cent of them were able to reach the deep or somnambulistic state and enjoy a completely painless labor and delivery.

In this reported series, initial induction was started about the fourth month of pregnancy, utilizing the method of eye fixation on a specific object, with simultaneous concentration on one thought. The initial induction period took 25 minutes, and each of the following sessions (averaging a total of 12) took a total time of 10 minutes.

During each of these visits the patient received positive suggestions concerning her forthcoming delivery, as to absence of discomfort, nervousness and tension. They were further told that they would have

complete control at delivery time; but even so, sedation and anesthesia would be available upon their request.

Regardless of the hypnotic state attained throughout the pregnancy, almost every patient noted a lack of tension, nervousness, irritability and the other minor complaints of pregnancy such as insomnia, constipation, heart burn, gas, nausea and vomiting.

In regard to duration of labor in the group hypnotized, the average for the primaparas was 7.4 hours and for the multiparas, 3.3 hours. This was compared to a non-hypnotized control group with average results of 11.1 and 8.3 hours respectively. All of those hypnotized had a sense of well being and strength; and during labor they were sleepy, but very cooperative. Following delivery, episiotomy pains were either diminished or eliminated, and there were no cases of post partum depression.

In a series of 24 patients hypnotized by Bradford,[7] after initial induction, from one to nine followup sessions were held in which several post-hypnotic suggestions were made. These were that: they would have a smooth and uncomplicated prenatal course; they would control their weight by strict adherence to the diet given them; they would recognize the presence of labor by nonpainful feelings of pressure from contractions; since they would be prepared to have their baby without suffering, there would be no fear or excitement; time would pass rapidly; other noise would not upset them; they would remember only the pleasant things; contractions would become stronger and closer together and there would be no after pains.

Results from this group were: ten (less than 50 per cent) delivered completely free of pain and required nothing; four required 50 mg. of demerol and also trilene; two required 100 mg. of demerol and trilene; and two received no benefit from the hypnosis.

Finally, according to a thorough study by Werner[4] and associates, in which 175 deliveries were made using a similar technique to the above series, a number of conclusions were drawn.

a. Ninety per cent of the babies so delivered had complete absence of colic in the first three months of life.

b. There was no need to resusicate a single infant.

c. In the hypnotic state, vital capacity was increased about 50 per cent over normal breathing and 100 per cent over breathing under anesthesia; thereby clearly reducing possibilities of fetal cerebral anoxia.

d. Incidence of inturmental interferance, of rotation, of mid forceps and of difficult types of delivery were definitely diminished.

e. There was definite reduction in duration of the first and second stages of labor, especially the latter,which averaged from 20 - 30 minutes for primaparas and 15 - 20 minutes for multiparas.

f. Nausea and vomiting were extremely rare.

g. Ninety per cent of the patients had bowel movements within 48 hours of delivery without enemas.

Thus it seems that hypnosis has the probability of being an extremely valuable asset in obstetrical anesthesia, in regard to the benefits bestowed upon both mother and baby. With skillful handling the physician could overcome the greatest objection to this method, the exhaustion of valuable time, by working in the necessary conditioning sessions through routine prenatal visits.

The unaminous consent of opinion that less than 50 per cent of pregnant women can successfully undergo this hypnotic procedure is the other great objection to its use. But rather than dampen the routine use of hypnosis in obstetrics, this fact should stimulate those who wish to use it properly to learn to objectively determine the likelihood of a good or poor candidate by her response in the initial induction and perhaps a few follow-up conditionings. Therefore, by choosing the potentially suggestible candidate to hypnotic anesthesia early in her pregnancy and spending a few minutes conditioning her during each routine prenatal visit, the obvious advantages of this method can be enjoyed by both patient and doctor with a minimum of effort.

V. CURRENT USE IN THE FIELD OF INTERNAL MEDICINE

Within the wide scope of internal medicine there are innumerable ways in which hypnosis can and has been used successfully. So broad is the subject that only a general consideration will be made primarily, with the more specific details limited to a few examplatory therapeutic methods given later.

First, in the tense patient about to undergo an uncomfortable or painful procedure, the use of hypnosis for the establishment of a relaxed and cooperative state is highly indicated. Such procedures include esophagoscopy, gastroscopy, sigmaidoscopy, catherization, bone marrow aspiration and needle biopsy of the liver. In each case, the physician must fully explain to the patient what he is doing and his reason for so doing, before beginning induction of hypnosis. This affords a greater rapport between therapist and patient, naturally leading to a better cooperation and easier induction.

When a complex diagnostic problem is encountered,(4) especially of a nature that recurrent episodes of symptomatology occur, that the physician has not observed, hypnosis may be utilized to facillitate the recall of exact symptoms, and of the circumstances preceding acute episodes. This is a more complicated procedure than that used for relaxation or analgesia, and should therefore be reserved for the physician who is well versed in the psychodynamics of such a method.

It is perhaps, that at this point, emphasis should be put on the precautionary measures, that necessarily precede any of the properly applied techniques of hypnosis.(23) Its use is indicated only after first performing a careful history and physical on the patient, to determine if his personality is intact, that he is free of all psychotic or prepsychotic symptoms. Use of hypnosis is definitely contraindicated in patients who are psychotic, severely depressed, obsessive - compulsive, with conversion reactions or those having a bizarre multiplicity of symptoms.

Another use of hypnosis in internal medicine is its application as an adjunct to chemotherapy. One may eliminate bothersome side effects of almost any medication such as nausea, headache, bowel disturbances or insomnia. Or it may be useful in the reduction or discontinuance of drugs which, in many instances, are taken to a degree of toxicity. This is especially pertinent to such drugs as the barbiturates, tranquilizers and narcotics. By using suggestion, the anxieties accompanying many conditions and necessitating the use of these drugs, are done away with; and, in so doing, the need for such drugs is also abolished.

Perhaps one of the most merciful indications for hypnotic suggestion, now and in the future, lies in its relief of pain and discomfort in patients with advanced and terminal, malignant disease. Here, (4) not only is the painful distress relieved with surprising ease, but dosage of analgesic and narcotic drugs are reduced; and these patients show definite improvement of appetite, a sense of well being and ability to sleep without sedation. Any doctor, upon contemplation of the horrors of terminal carcinoma cases he may have personally encountered, should be able to fully appreciate and welcome the advent of any such means, which would reduce both the mental and physical suffering seen in these people.

To more clearly illustrate the methodology and degree of success or failure of hypnosis, as used in internal medicine, a brief review will now be made on its application toward three common medical problems: migraine headaches, warts and chronic alcoholism.

Harding (10) applied hypnotic therapy to a series of 25 patients with the migraine syndrome, after first establishing the diagnosis through a thorough medical evaluation, including an E. E. G., in each case. The patients, ranging in age from 17 to 60, had been suffering from the migraine syndrome for an average of 18.5 years, and most of them, after having grown progressively worse, had turned to hypnosis as a last resort.

In the initial induction of these patients, a modification of the Bernheim eye fixation method was used, in which, while sitting with thumbs extended, suggestions of eyelid heaviness and drowsiness were made. Then the thumb was brought down to contact the nose. Once induced, suggestions of catalepsy and arm levitation were made to deepen the hypnotic trance and three groups of suggestions were then conveyed.

The first group of suggestions pertained to the explanation that the cause of their headaches was due to the conditioning of the blood vessels in their head and how, by relaxation, the vessels could be made smaller. The second group of suggestions went on to explain the relativity of pain, and how much better they would feel if they spent less attention to the head pains. The final group of suggestions was directly focused on the disappearance of their head pains. This entire session took about 45 minutes.

In this series, there were two follow-up sessions within six days of the initial one, each requiring 30 minutes and consisting of repetition of the originally made suggestions. In addition, a waking suggestion was made that if the headaches should return, it would be due to lack of practice in the methods of relaxation given them. Of the 25 patients treated: 5 had complete relief, 10 had good relief, 5 had some relief and 5 were failures.

In the treatment of warts by hypnosis, Sinclair and Gieben (28) applied therapy, utilizing methods of relaxation, eye fixation, and repetitive commands, on 14 patients. All of these had bilateral and multiple, common warts of at least 6 months duration. Following initial induction, two types of suggestions were made: that the warts on one side (usually the hand) would disappear; and that, on awakening, the patient would perform some specific act, as specified. Time required to effect a cure of the treated side averaged from five weeks to three months.

The reason for treating only one side was to leave the untreated side as a control for studying the effectiveness of this method. And the rationalization, behind the waking suggestion of performing some specific action, was to guage the depth of hypnosis achieved, by whether or not this post-hypnotic suggestion was accepted. Only those patients, who went into the medium deep or deep states, would so respond.

Of the 14 patients treated in this manner, an adequate depth of hypnosis, as determined by a responsiveness to the post-hypnotic

suggestion, was reached in ten of them. And in all ten of these people, a complete cure of the warts, only on the treated side, was achieved. The treated warts appeared to shrivel up and disappear without leaving a scar.

The final specific type of disorder to be discussed here, under the auspices of internal medicine, is that of chronic alcoholism. The method of treatment in these cases is referred to as hypnotically induced aversion reaction. This reaction is similar to that, in which Antabuse is used to bring on a disagreeable experience in association with the act of drinking, the only difference being the method in which this unpleasant association is produced.

Miller (20) treated 24 patients, suffering from chronic alcoholism over a period of 3 to 24 years, with hypnotic aversion. This consisted of initial induction, using the endogenic method of hypnotic relaxation, and a single following session within a week of the first.

Each procedure required from three to five minutes, in which time the patient was told to relive his worst hangover, complete with malaise, headache, nausea and vomiting. Under the influence of this suggestion, another is given, permitting him to taste and smell all types of alcoholic beverages, at which time the patient usually got nauseated and often vomited.

Finally, a specific post-hypnotic suggestion is made that whenever he tasted, smelled, or even looked at alcoholic beverages in the future, he would begin to recall these horrible hangover symptoms. It is also

advisable to further influence the patient post hypnotically against use of sedatives or tranquilizers, as alcoholic substitutes.

Of the 24 patients treated in this manner, only three relapsed, while, at one time or another, about one-half of them made attempts to test themselves with alcohol, and all of them promptly developed aversion reactions and discontinued any further attempts.

Prior to this mode of therapy, the physician must fully explain the reaction to the patient, emphasize that the procedure is harmless and at no time force the patient to undergo the procedure. Under the hypnotic state produced here, affectivity is markedly increased, while intellectualization is decreased; and, in most instances, the physician merely intensifies the disgust, aversion, and displeasure of the hangover state, by having the patient relive it.

Aversion reactions of this type have also been successfully applied in treatment of obesity, compulsive cigarette smoking, and some types of drug addiction. It should be added though, that this type of treatment is subject to the greatest criticism of hypnosis today; that of the stripping of a well-developed defense mechanism from unstable persons, without providing an alternative protection from their underlying problems. Thus, it is in these people, that a most diligent search into their background, along with a careful history and physical, be made prior to therapy, in order to avoid any person with psychotic tendencies.

VI. CURRENT USE IN THE FIELD OF SURGERY AND ANESTHESIOLOGY

Surgery and anesthesiology are so interrelated in their relationship to hypnosis, they shall be treated as a single unit. According to Betcher,(5) hypnosis is not a substitute for chemoanesthesia, in that it can be used alone with success in only about ten per cent of selected patients; but in balanced anesthesia, a combination of hypnosis and chemoanesthesia, it is very useful. Used in such a manner, it considerably lowers the amount of inhalation agent needed, reduces the need for heavy pre-op sedation and obviates the use of basal chemical agents, such as I. V. barbiturates.

Again in reference to Betcher, the indications for hypnoanesthesia include: patients whose apprehension regarding anesthesia is so great that it interferes with the smooth induction of anesthesia; patients in whom the use of pharmacological agents is contraindicated, patients in whom the necessity for repeated anesthesia may create disturbances in the physiologic and mental status; patients needing emergency surgery, who have full stomachs and, as a short term psychotherapeutic measure, in patients with post-op complications.

The practicality of this mode of anesthesia can especially be seen in its use by the small community general practitioner. In such places, one sledom finds the complex and expensive paraphenalia of big city anesthesiology; and, more often than not, it is impossible to have on call anesthesiologic assistance. Utilization of hypnotic techniques here, not only contribute greatly to the ease and effectiveness of anesthesia, but also saves the patient considerable expense and difficulty.

As Deisher (9) states, the acutely injured patient makes an excellent subject for hypnosis, in that he wants something done and subconsciously longs for magic and miracles to relieve his suffering, thus increasing his susceptibility to hypnotic induction. In such a patient, first through friendly conversation, the physician applies tactics of diversion, ego inflation, and reassurance. This easily leads to relaxation and then sleep, at which time anesthesia and analgesia can be suggested with regular benefit and, quite often, complete success.

Pediatric surgery, whether it be minor or major, has shown especially rewarding results in its utilization of hypnotic induction. With their normal curiosity and willingness to accept new things, children make excellent hypnotic subjects and are usually induced with ease.

In a series of 126 children ranging from 3 to 15 years of age, Nagle (22) applied pre-op hypnotic induction through a technique of visual imagery. Here, through conversation, the physician discovers some especially favorite subject in the child's life, usually a certain television program. Then, on arrival into the operating suite, appropriate suggestions are made to persuade the child to visualize this favorite program. Once he is thoroughly engrossed in his world of imagination, the light hypnotic trance is established, and a conventional type of chemoanesthesia may be applied, during which time post-op waking suggestions of well being are made.

Results in this series were: 74 developed definite trances; 40 reached hypnoidal level, in that they were relaxed, calm or showed other signs of early hypnosis; and 12 were failures, with little or no relaxation. A total time of five minutes was required to induce the trance state.

This same author has concluded that, through this method, about 90 per cent of the children between the ages of 5 and 12 years can be rapidly induced into the trance state or at least achieve ample relaxation and distraction sufficient to permit general anesthesia with minimal psychictrauma. Failure, in those below the age of 5 years, is attributed to the difficulty in establishing communication and rapport with the child. Likewise, in the group older than 12 years the reason for failure lies in the fact that, at this age, the child has lost his belief in magic and is not willing to follow the simple suggestion of closing his eyes and watching television.

Illustrating the use of hypnosis in general surgery, Werbel (32) reported his results using it in surgical hemorrhoidectomies. In his series, a total of 22 patients, with both internal and external hemorrhoids, all underwent the same type of anesthesia(spinal) and the same type of surgical procedure, except that one-half of them received hypnosis. The group receiving hypnosis underwent the first session on the evening prior to surgery. At this time, suggestions were made that they would feel no rectal pain following surgery, would be relaxed during bowel movements, and would immediately go back into

hypnosis under the direction of the surgeon, during their hospital stay. Each day, following surgery, the patients were rehypnotized by the surgeon and given the same suggestions over again.

Resulting from this: during the first bowel movement, 8 patients were completely pain free, and only 3 of them had moderate pain. This was compared to the non-hypnotized control group in which only 2 were free of pain, 4 had moderate pain, and 5 had severe pain on moving their bowels. With the exception of the 3 patients in the hypnotized group who had moderate pain, the post-op narcotic injection in this group averaged 3 per patient, as compared to 7 injections per patient in the control group.

Somewhat similar results were noted by Bonnilla[6] in his experience with hypnosis in 9 patients undergoing uncomplicated arthrotomy of the knee, for various reasons. In this series, each patient was hypnotized once daily for 4 consecutive days preceding surgery, with a total expenditure of 70 minutes per patient. Suggestions were given in the nature of reducing pre-op anxiety, alleviating post-op pain and hastening rehabilitation. Induction was satisfactory in all 9 cases attempted.

By comparing this group with non-hypnotized patients undergoing the same procedure, it was found that those hypnotized required only about 75 per cent of the post-op demerol needed by the control group, enjoyed a sound sleep the night prior to surgery, and went on to recovery in almost one-half the time required by the control group. Thus, it was

concluded that, by so using hypnosis, there was a reduction in awareness of post-op pain, an easier pre and post-op course and a saving reward to both patient and hospital, in regard to the lesser stay in the hospital for recovery.

VII. TODAY'S CONTROVERSY ON MEDICAL HYPNOSIS

Concerning the issue of a generalized usage of medical hypnosis, the scientific world finds itself fairly well segregated into two distinct schools of thought. The one side allows that hypnosis is of little to no therapeutic value and is, in fact, even of a dangerous nature. Those contending to the opposite view maintain that hypnosis has already proven to be a valuable therapeutic asset, and, that with organized training in its proper usage, it can eventually become a practical and effective tool of almost any medical practitioner.

First, to gain a clearer insight into the nature of this current controversy, some of the prevailing objections to widespread practice of hypnosis will be discussed. Barber (3) claims that, in reference to symptomatic relief from pain, the results of conventionally applied placebos is at least twice as effective as that of hypnosis for the same purpose. On further elaboration, he quotes the figure of from 5 to 25 per cent of the population, as being able to experience the degree of hypnosis capable of sustaining symptomatic relief from pain.

Rosen, (26) as an authorized representative of the A.M.A. on the subject, warns of the significant danger of any physician attempting the practice of medical hypnosis, without having first been thoroughly

trained in the psychodynamics involved in such a procedure, along with having gained a precise fore-knowledge of all its contraindications. However, he does acknowledge that hypnosis is now of pronounced value in clinical practice and will, in all probability, turn out to be a potent medical research tool.

From a moral and ethical standpoint, Meares (17) points out that the common, though pseudoscientific, objections to hypnosis are: domination of the patient; weakening of the will; possibility of immoral acts; elicitation of secrets; dangers of increased suggestibility and overdependence of the patient on the therapist.

Probably the most popularly pursued complaint against hypnosis is that against eliciting symptom relief by this method. In so relieving such symptoms as phobias, non-organic pain, hysterical paralysis or dermatitis (14), one removes the last defense against a more serious and deeper emotional conflict, such as severe depression. In fact, it is even reported that hypnosis may induce psychopathological states in the hypnotist himself, such as the fantasies of omnipotence and omniscience.

Summarily, in the argument against hypnosis, Walberg (14) states that it is falsely advocated: "as a scalpel to the unconscious in an effort to effectuate a shortcut to psychoanalysis; as a bludgeon to crush or disintegrate symptoms; and as a device to bring the patient into conformity with philosophical precepts and modes of living dictated by the therapist, who presents himself as a model."

Turning now to some points of view in defense of hypnosis, reference may first be made to previous sections in this paper, which have already covered its successful application in different modes of medicine.

Kroger (13) has given consideration to the following misconceptions toward hypnosis: that a large problem is learning to induce the hypnotic state; that hypnosis is associated with sleep or unconsciousness and that word hypnosis is divorced from the world of reality. His respective answers to these statements are: any novice can induce hypnosis; it is actually characterized by a state of hyperactivity, and the hypnotic phenomenon occurs everyday and is a perfectly natural response in daily living.

It is further argued (30) that all phenomena experienced in hypnosis have their natural counterparts in the waking state. An example of this is seen in hypnoanesthesia, which is similar to the person who receives a contusion or laceration and is so busily occupied with something else that he is not even aware of the wound.

Even though the term "sleep" is often used in suggestive induction techniques, it is not a physiological sleep. The subject hears the operator, knows what is going on, and concentrates only on what the hypnotist says to him, disregarding everything else. The hypnotist is dealing with the subconscious mind of his subject, and, in the process, everything said by the operator is carefully considered by the subject's subconscious, before being accepted or rejected. No hypnotized person will do or say anything against his ethical or moral code.

As to the dangers of hypnosis, this point seems to be much overstressed.(31) In skilled hands, when used for therapeutic purposes, hypnosis is one of the safest of all medical procedures. Even in the event that the hypnotized subject is not aroused by the hypnotist, he will waken spontaneously after a short time.

There is a common ground of mutual agreement, held by both schools of thought, in certain factors concerning medical hypnosis. First of these considerations is the fact that the diagnostic and therapeutic application of hypnosis, for medical and psychiatric illness, should be solely limited to those in the medical profession. Any person, not holding a medical degree, should be legally outlawed from using this type of procedure, since such people cannot assume responsibility for patient care. Such thought has already stimulated Great Britain to outlaw the use of hypnosis for other than medical purposes. Wisconsin, New Jersey, and Idaho are presently seeking similar legislation.

In our present day of the "fast buck", it is naive to believe that the commercial aspects of such a popularly known entity as medical hypnosis would be overlooked. Indeed they have not, and thus we see today a multitude of three-day quickie courses in hypnotism, offered to the medical and dental professions all over the country. These courses usually are conducted by laymen, well versed in the rudimentary techniques of hypnotism, but with only enough medical knowledge to suggest some of its more common clinical uses. Such courses should be condemned by the medical profession, in that they include none of the

psychodynamics involved and, in general, are most inadequate in every respect toward teaching the basic principles of medical hypnosis necessary for its proper and competent usage.

Finally, based on these various pros and cons concerning medical hypnosis, a prospective look to the future of this subject should be made. It appears that we have merely begun to explore the possibilities of this phenomenon as a medical tool. The largest impeding factor toward its general use, as well as source of diverging opinion, seems to stem from the complete lack in the organized study and teaching of its principles and applications.

To better express this problem, along with an answer, one might turn to a report handed down by a special subcommittee appointed by the British Medical Association.(1) In this report on April 23, 1955, it was recommended that:

> "A description of hypnotism and its therapeutic possibilities, limitations and dangers should be given to medical undergraduates during their psychiatric course."

Therefore, if this recommendation would be heeded and a thorough course of medical hypnosis be adapted by medical schools throughout the country, as part of their regular curriculum, perhaps the wide variance in procedures and successful applications of hypnosis could be limited to some basic and specific standards.

Such properly organized training, by medically trained experts in this field, would lead to a common understanding of the precautions and contraindications in its use and thus aid greatly in eliminating the presently advocated fears of hypnotism.

(4) Lastly, through careful psychiatric research, hypnosis may well serve to play a valuable role in the greater understanding of mental functioning, both conscious and unconscious, including an investigation of the nature of dreams and of memory. Its role in both psychoanalysis and psychotherapy may well prove to be the greatest value of all in medical hypnosis.

VIII. SUMMARY

A broad analysis on the subject of medical hypnosis has been presented. Its history has been traced back from ancient Egypt, through its first widespread therapeutic application by Mesmer in the 18th Century, to its current vogue of popularity.

The integral workings of hypnotism have been explained as a state of heightened suggestibility, and from this basic understanding, the factors related to induction and the various secondary phenomena of hypnosis have been discussed. Going on into actual methodology of hypnotic induction, basic procedures and techniques are presented, along with factors that influence the success or failure of their application.

Concentrating next on the several phases of medicine that utilize hypnosis in their practice, the fields of obstetrics, internal medicine, surgery and anesthesia are discussed.

Obstetrics entertains probably the greatest use of hypnosis today. It is shown that although less than 25 per cent of all the patients undergoing this procedure have been able to reach an ideal state of

hypnosis, the benefits bestowed to both mother and baby in all cases seem to warrant its use on at least a trial basis.

In discussing the practical uses of hypnosis in internal medicine, the great flexibility of this phenomena is illustrated. Included here are its relaxing effect in painful procedures such as esophogoscopy and catherization, its phenomenon of regression used for diagnostic purposes, its adjunctive value in drug therapy, its relief of suffering in terminal malignancies, its use in treatment of migraine headaches and of warts, and its aversion technique in the treatment of chronic alcoholism.

The fields of surgery and anesthesia are considered together, with hypnosis shown as an adjunct to both. Indications for its specific use are given, with emphasis on pediatric procedures. Values of this technique are shown in its elimination of pre-op tension, reduction of chemoanesthesia needed and greatly lessened degree of post-op discomfort.

Finally, a synopsis on the present-day arguments, both pro and con, concerning the generalized use of medical hypnosis are given. This discussion encompasses the dangers of injudicious use of hypnotic procedures, the moral and ethical problems commonly considered and popular misconceptions as to the principles involved. The subject is concluded with conjecture as to the future of medical hypnosis and steps to be taken in improving its use in the practice of medicine.

IX. CONCLUSION

The use of hypnosis is undergoing a rebirth in the medical field. Although there are many flaws in its application today, which have led to failures and valuable time wasted, there also exists a multitude of testimonials toward its satisfactory and successful use, in almost every wake of modern medicine. Through the combined efforts of the medical and legal professions, the quackery and misapplication of hypnosis could be greatly reduced, if not abolished, by restricting any medical use of it to licensed physicians only. At the same time, competent and skilled teaching of the subject, with all its ramifications, could be offered to all medical personnel. Thus would there be the establishment of a standardization in the technical aspects and proper usage of medical hypnosis to follow in the present and improve on in the future.

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