Ritual and Ceremony in Intraoperative Magnetic Resonance Imaging-Assisted Brain Surgery

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Previous photographic research into traditional and shamanic healing practices in Peru and Bolivia and a review of the literature suggested that all medical practices have cultural determined nonmedical activities as integral parts of the healing encounter. These include costume, ritual, ceremony, environment factors that were looked for in a western clinical encounter for this paper. A patient was followed through pre-op preparation and iMRI assisted brain surgery. All activities were photographed extensively and evaluated in a broader healing context. A number of activities were visually and metaphorically comparable with those seen in other practices. These are discussed as rituals of intention on the part of the caregivers to focus their skills on healing and also to mindfully engage the patient in the healing process. Artistic observation and analysis may be an effective way to identify these non quantifiable elements of the healing encounter and suggest directions for further research into the emotional components of the healing process.

Key words: Ritual, ceremony, healing encounter, placebo, shamanic practice

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INTRODUCTION

With the rise of science-based medicine during the last century, the environment of the clinical encounter has become a no-nonsense place in which the practice of scientific medicine takes place. Within this environment, there is human interaction, and the pleasantries of greeting and personal concern, but up until recently, these experiences by the patient have not been considered part of the treatment protocol. Now attention is being paid to the nonspecific events of the clinical experience that may contribute to patient recovery.[1-3] Western clinical practice is science based; our belief in the power of science to heal us is an integral part of our healing process. The science approach of our medical system is highly effective in combating disease, treating symptoms, righting imbalances, and physically fixing things. As a patient moves along this path, there are psychological markers that reinforce the healing power of scientific medicine. This includes such things as the environment of the examination rooms, the presence of nurses and high-tech equipment, the withdrawal of body tissues and fluids for analysis, white coats and stethoscopes, all signs of western biomedicine. However, these things are not recognized in biomedical practice as having therapeutic effects as they are in other practices. All global practices have rituals,[4] but some, like those in traditional and shamanic healing, may seem strange and unfamiliar to western eyes because the particular signs, rituals, and costumes are based on a different belief system that underlies the practice. Different yes, but they all serve the same purpose: to help bring the patient mindfully into the healing process.

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In biomedicine, this mind/body concept of healing is termed psychoneuroimmunology, psychological activation of the physiological processes of healing, the immune system. Emotions can both positively and negatively impact the functioning of the immune system[5] that can influence the progress of recovery after surgery.[6] Psychological modulation may also occur on other physiological processes.[7] The noted anthropologist Claude Levi-Strauss called mind/body healing the ultimate enigma of medicine, to understand how symbols are converted to metabolic processes. He noted in the many cultures he studied that all had a set of rituals, costumes, and environments that were rigidly part of the healer/patient encounter even though by western medicine standards, these (nonmedical) events and activities are not considered to have therapeutic properties. Yet, these practices heal.[8]

Ritual, ceremony, and other nonscience activities are not acknowledged as part of healing in biomedicine except vaguely as a placebo effect. Western medicine needs to know a treatment specific cause and effect through established physiological mechanisms of action to validate its efficacy. Yet, for many of our procedures and medicines the mechanisms behind their efficacy are incomplete, conjecture, or simply not known; the hard evidence of random, controlled clinical trials, the gold standard of clinical effectiveness, is not there. An analysis of 1,016 systematic reviews of published therapeutic research studies by the Cochrane Collaboration found that 44% of the studied treatments were likely to be beneficial, 7% were likely to be harmful, and 49% evidenced no effect or insufficient evidence. Further research was encouraged in 96% of the reviews.[9] A number of established surgical procedures have been found to have no specific beneficial effect when compared with sham procedures.[10-12] The pharmacology of tricyclic antidepressants and related drugs remains incomplete, and coherent interpretation is limited by a lack of compelling psychobiological theory of

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mood disorders.[13] They are part of our medicine because of a history of positive outcomes.

Many experienced doctors understand there is a mechanism related to but beyond psychoneuroimmunology at work that facilitates healing in western practice.[6] It is little understood scientifically, an uncomfortable place for many practitioners of biomedicine because it is given scant coverage in medical schools. Knowing little about it and conflicting with their scientific knowledge, many doctors find it easier to play down or dismiss its contribution to the healing process.

This investigation was inspired by previous photographic research into the ceremonies and rituals associated with plant medicines used by traditional and shamanic healers in Bolivia and Peru. My hypothesis was that these activities might be codes for methods of gathering and preparing the plants for best healing properties. Information derived from these codes could help in developing research protocols for scientific understanding of these medicines to bring them into western clinical practice. Systematic study of the resulting photographs and video along with anthropological research revealed the healing methods of these practitioners to be a constellation of practical treatments and ritual/spiritual interactions. The rituals and ceremonies are based on a shared belief system as to the etiology of the illness (disease) and the path (recovery) to wellness (health) and reintegration into the community. These were observed to happen in specific healing environments with expected medicines, objects, costumes, and techniques for healing. Common to all healing practices is the identification of the illness, a treatment plan to restore health and various actions and objects to instill confidence in the patient of the healer's methods, medicines and knowledge. Frank and Frank contend that there are three main factors present in an effective healing process: (1) the installation of hope through "naming" the problem and making the diagnosis in a context understandable by the client; (2) emotional arousal, dynamic healing techniques, and the creation of catharsis, hope, and confidence; and (3) a feeling of control and a sense of mastery gained by the client in regard to the presenting problem.[14] They went on to observe that all healing systems share common elements: each has a theory of affliction, defined roles for patient and healer, a circumscribed place and time for healing rituals, specific symbolic actions with healing efficacy, and consequent expectations for recovery.[14] I felt if I could do similar photographic research in western biomedicine, the resulting imagery would reveal these parallels between traditional and scientific healing practices.

The object of this study was to use photographic observation of a therapeutic encounter to observe the roles of patient and healer(s), their activities, and interactions as they take place in the clinical environment. I hypothesized that although the costumes, techniques, and activities of our medicine differ dramatically from traditional and shamanic practices, they serve a similar healing strategy–to bring the patient mindfully into the healing process. These will be qualitative, experiential concepts rather than quantifiable constructs. The esthetics of photography through its balance of objectivity and subjectivity is the ideal medium with which to make these observations. This article relates my photographs, experiences, and analysis of healing activities and environments I observed when I followed a patient through intraoperative magnetic resonance imaging (iMRI)-assisted brain surgery.

METHODS

Abbott Northwestern Hospital in Minneapolis was identified as a location for this study. Associated with the hospital campus is the Penny George Institute for Health and Healing, one of the leading integrative medicine programs in the United States, with an average of 60,000 healing interactions with patients a year. One of the Institute's physicians, Dr Gregory Plotinkoff, was familiar and supportive of my work with indigenous healers in South America. Finding merit in my plan, he put me in touch with a public relations manager who could facilitate entrance into the hospital's various departments and doctors. I expressed in our first meeting that I would like to start with visually compelling therapeutic environments shaped by the high-tech machinery of scientific medicine.

She suggested we start with their iMRI assisted surgical suite, adding that it's clad in stainless steel and should make a nice photograph.

iMRI, was developed to allow an MRI scan to be taken during the course of surgery, after the surgeon completes the work but before he or she closes the entry. If the MRI shows that the tumor has not been totally removed, the surgeon can go back in, using the new scan as a guide to remove the rest of the tumor during the same operation.

For esthetic reasons, I used medium and large-format film cameras for this study as I did in South America. Because they are slower to use, they guide the photographer to a more contemplative method of observation and photography than the volume shooting of high-capacity digital SLR (single-lens reflex) cameras. Existing natural light was used to reveal more accurately the visual environment over the invasive flat lighting of flash. A number of the photographs were evaluated as large prints for which large-format film provides a greater range of esthetic quality than digital capture.

We entered the shimmering stainless-steel environment of the surgical suite. The MRI scanner was parked behind two sliding steel doors that shielded the intense magnetic field of the scanner from the surgery suite, which allowed for use of ferromagnetic surgical tools and equipment during the surgeries. It is suspended on sturdy tracks on the ceiling on which it rolls out into the suite, and a specially designed operating table, glides the patient into the bore. After making sure all magnetic material was removed from the suite, the technician opened the doors, revealing the giant machine. Its healing power was palpable as it moved purposefully into the operating theater. I was struck by how much it looked like an eye. The center bore into which the patient goes looks like a pupil and the surrounding shielding resembling the iris and the larger casing the tissues that surround the eye, a visual metaphor for what the machine does–see inside the body. I set up a 4×5 camera to photograph it and used the overhead surgical lights to illuminate the central bore, drawing attention to it while the light spilling onto the shielding created a radiating pattern of an iris (Figure 1).

I asked if I could follow a patient through a surgical procedure in this suite. The manager was able to find a patient and surgeon