

Miracles and Medicine: An Annotated Bibliography

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The search for scholarly articles with the word “miracle” in the title resulted in limited findings. There was a subset of articles addressing miracles from the perspective of saints, religions, or healers. These seemed to be focused on examining the legitimacy of miracles or examining the context in which miracles occurred. The authors of another set of articles challenged the concept of miracles using criteria to illustrate their points. Although the term “miracle” may not be present in the titles of many articles, what is clear is that if one delves deeper into the literature, miracle terminology is very present in the beliefs, hopes, and practices of patients. Several articles explained these beliefs, and the most poignant point discovered was the discordance between the beliefs of patients and healthcare providers, often resulting in tension. What was discussed over a decade ago by Rushton and Russell is that the meaning of the term “miracle” is what matters the most. For some patients, it may mean cure; for others, it may mean healing on various levels. An understanding of the meaning and the recognition of the existence of these beliefs is critical within the context of holistic care.

Moog FP, Karenberg A. *St. Francis came at dawn—the miraculous recovery of a hemiplegic monk in the Middle Ages. J Neurol Sci* 2003;213:15–17.

The authors of this article present a case report of a miracle ascribed to St. Francis from the 13th century. This case was a detailed summary of the recovery of a hemiplegic monk who St. Francis healed through the use of touch to the afflicted parts of his body. Historical research on neurology before 1500 is actually lacking, but the authors point out that in the Middle Ages, there were many unexplored accounts of miracle cures. In this case, the monk’s illness is described in detail—characterized by hemiplegia, mental confusion, and a distorted voice. Using current neurologic diagnoses, the two possible interpretations are that of “prolonged ischemic neurologic deficit (PRIND) or a psychogenic attack.” An important point made by Charcot, a French neurologist in 1892, was that the most important act of healing was the unshakable faith of the patient. These authors in the translation of the

case report provide a glimpse of the theological, literary, and medical context of this miracle.

Muzur A, Skrobonja A. *Miraculous healings as a time-space-conditioned category—the example of St. Thecla. Coll Antropol* 1998;26:325–332.

This article is an account of the differences in miracles between saints in the East and the West. The authors provide evidence that the phenomenon of miracle has been present in each time period and each civilization. The definition is common in both the East and the West, and it is something that is unexplainable. What changes over time are the criteria that we use to define it and knowledge of the time when it occurs. The authors initially present ideas from Buddha, early Christians, and Mohammed about miracles. (Note, however, that these interpretations of Buddhist and Islamic views of miracles differ dramatically from the views presented by the experts in these religions contributing to this special issue). According to these authors, Buddha and Mohammed favored miracles of other types than healing. Buddha, for example, differentiated between miracles of magic, miracles of thought, reading, and miracles of instruction.

For early Christians, although most discussions of miracles begin with the Bible, early church leaders had their views of miracles. Origen interpreted miracles as the means by which the Apostles could persuade their audience. Augustine saw miracles as a means to meet human needs, while Gregory the Great regarded miracles as necessary tools for conversions. Thomas Aquinas defined three groups of miracles: those that were not feasible by any natural power, events that could occur but were unusual, and those that were feasible by a natural power but not so rapidly (ie, instant cure). At the time of Aquinas, there was no mention of either the patient or healer, and only the results of the miracles (and not the mechanisms) were described since the cause of the miracle was God. The authors also describe in detail the miracles of St. Thecla as described by Basil of Seleukia (5th century AD) to illustrate cultural differences between Eastern and Western thought.

This article traces the thinking of theologians of the early church, as well as that of other religions, illustrating that the definition of miracles may be similar but the context in which miracles occurred differed.

Mansour AM, Mehio-Sibai A, Walsh JB, et al. *Jesus and the eye: New Testament miracles of vision. Acta Ophthalmologica Scand* 2005;83:739–745.

This article evaluates the accounts of three eye miracles performed by Jesus in the New Testament. The authors’ definition of miracle is a visible action done by God to represent His divine authority and power over man and nature.

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These three vision miracles identified and described all of the men as being blind. The article depicts these miracles in detail and then critically evaluates their historical credibility, finding them reliable. Jesus did not act as a doctor when healing the eyes, for his tools and methods were words, prayer, spit, and touch. The outcomes were complete cures, an important characteristic of a miracle.

How these outcomes are interpreted depends on the individual and his or her religious background. The authors suggest that Christians have faith in miracles, while Jews see it as sorcery, atheists as mythology, and the scientific person as psychotherapy.

■ *Garner J. Spontaneous regressions: scientific documentation as a basis for the declaration of miracles. CM Journal 1974;111:1254–1264.*

The author, associate editor of the journal, used personal observations, interviews, and manuscript review to write about possible miraculous cures at Lourdes and then describes how the Catholic Church examines evidence for miraculous cures. The article clearly describes the process of how the church decides if a cure is of divine intervention.

Several case studies from Lourdes illustrate the process of first proving that the illness existed with an established diagnosis, that the prognosis was very poor with or without treatment, that the cure happened virtually instantaneously, and that the cure was permanent. First, at Lourdes, three separate panels of physicians must all agree that the patient has met the above criteria. Then the local diocese of the cured person sets up a commission to review the record. From these data and expert recommendations, the Church makes a pronouncement.

The Church also investigates miraculous cures, other than Lourdes, during the veneration, beatification, and canonization process. The author once again illustrates this process with a case study.

The author speculates on the actual value of the medical bureau examination of cases at Lourdes. He doubts whether the process of using scientific logic to prove a miraculous cure also proves that there is divine intervention. In his observations, the author notes that when people come to Lourdes, they come to pray and not to ask for a miracle. Just being at Lourdes can cure people of sadness and despair, and it helps people to better understand the cycle of life.

■ *May P. Claimed contemporary miracles. Med Leg J 2003;71:144–158.*

This article is a verbatim summary of a talk by Dr. Peter May to the Royal Society of Medicine in 2002. He describes his action of examining the claims of a number of miracle healers for purposes of determining the legitimacy of these claims. His interest in this evolved from his concern about the dangers or harms that exist in seeking care from “spiritual healers.” These dangers include stopping medications, distress for those not experiencing a healing, negative thinking, financial costs, self-deception, and the fundraising tactics of the faith healers. May then discusses what a miracle is. Five criteria for a miracle were outlined by Pope Benedict 14th in 1735 and include an incurable disease which does not remit, is healed instantaneously, completely and without any therapy. Dr. Mays approach was to ask healers to produce their best cases, and he then looked at the medical records of the cases. In this presentation, he presents eleven cases and the conclusions he came to after reviewing their records. Some of the broad explanations or categories

he used to summarize the cases were symptomatic improvement, natural processes, mistaken diagnoses, and spontaneous remissions. Libel action has prohibited his efforts to get all of his 80 case histories out in print.

■ *Bishop JP, Stenger VJ. Retroactive prayer: lots of history, not much mystery, and no science. BMJ 2004;329:1444–1446.*

This article is really a rebuttal to the idea of retroactive prayer that has been supported in some studies in the literature. The authors claim that these ideas are built on confusion and lack a deep physical model. The authors present the clinical science examining intercessory prayer and conclude that the evidence is too weak to support the claim that prayer works. They then go on to discuss the fact that quantum physics provides no basis to expect this phenomenon. Their conclusions are that religiosity and spirituality may be reasonably related to health outcomes, but not through the mechanisms of prayer influencing the world at a distance of space and time. According to these authors, the mechanisms that other authors have suggested to explain the phenomenon have questionable connection to medicine and are steeped in controversy.

■ *Shermer M. Miracle on probability street. Sci Am 2004;291:32.*

This article reflects on the possibility of the occurrence of improbable events that are regarded as miracles. Using the principle of probability called the Law of Large Numbers, the author demonstrates that when the probability of an event is infrequent in a small number of trials it will be much more probable in large sets of trials. The author goes on to illustrate that given enough life events and enough people an improbable premonition, thinking about the death of a person right before it happens, becomes probable. Coupled with the cognitive phenomenon of confirmation bias (whereby we notice what supports our idea and we ignore what does not), we interpret unusual events that do not actually violate the laws of nature as “miracles.”

■ *Wagner JT, Higdon TL. Spiritual issues and bioethics in the intensive care unit: the role of the chaplain. Crit Care Clin 1996;12:15–27.*

The authors describe the role of the hospital chaplain as distinct from community clergy. As hospital staff members, chaplains have specific education and training through hospital internship programs with close supervision. They rely on referrals from hospital staff to identify those in need. The article describes numerous roles of the chaplain, including working with patients and staff and helping physicians.

The role of chaplain in the ICU is different from other hospital ministry settings, mainly because the patients are more critically ill, have less energy to talk, and have altered states of consciousness. Frequently, chaplains develop expertise in bioethics and serve on the ethics committee, helping ICU staff with ethical issues and helping families and patients with advance directives.

The article discusses one family’s decision that results in non-beneficial treatment due to their hope for a miracle. The authors reflect on the role of the chaplain in working with family members and with the staff. They explain why people hope for miracles, give examples of several generic features of hoping for a miracle, and

how this hope is reflected in religious faith. The authors also identify several approaches the chaplain has used in helping families resolve feelings and cope with the reality of letting go of their loved one.

■ *Ruston CH, Russell K. The language of miracles: ethical challenges. Pediatr Nurs 1996;22:64–67.*

The language of miracles is commonly expressed by both patients and professionals in healthcare settings. For professionals, miracles may refer more to the presence of technology or the expertise of the staff. From a more traditional perspective, however, miracles are linked with faith in God rather than faith in humanity or technology. The meaning of the term is dependent on factors such as religion, spirituality, world view, and culture. The authors provide us with a definition: "Miracles are unexplainable events or actions that challenge the limits of humans, technology, or apparently contradict known scientific laws."

The plea for miracles among patients or parents of gravely ill children, as is the case in this article, is the focus of the discussion. In dire situations, the appeal to miracles is common and often results in negative responses by professionals, resulting in deterioration in the relationship between parents and caregivers and a perception by the parents that there is a lack of commitment on the part of caregivers to prolong and promote their child's life. The authors provide the reader with some of the dynamics of the appeal to miracles. While there may be the presence of denial, avoidance, or misunderstanding, the more likely explanation is the interplay between the personal events, faith, and spiritual dynamics. These factors include dealing with the grief connected to loss, a change or threatened change of a relationship with God, or personal family dynamics. There may also be attempts to remain faithful to God during this very difficult time or the parents may see profound meaning and purpose in suffering because of religious beliefs. Strategies for caregivers include searching for common ground, assessing understanding, honoring one's faith, and trying to understand the meaning of miracles.

■ *Mansfield CJ, Mitchell J, King DE. The doctor as God's machine? Beliefs in the Southeastern United States. Soc Sci Med 2002;54:299–409.*

This article presents results from a study that used a telephone survey to investigate questions regarding the role of prayer and spiritual beliefs related to healing among 1052 households in eastern North Carolina. The majority of the subjects surveyed were Protestant. The survey explored a variety of questions including belief in miracles, whether God works through healers, and whether people discuss spiritual concerns with their doctor. Eighty-seven percent of the respondents said they believed in religious miracles.

The major findings of the study were: 80% of respondents believe God acts through physicians to cure illness, 40% believe that God's will is the most important component of recovery, and that spiritual faith in healing is strongest in women, African-Americans, Evangelical Protestants, the poor, sick, and less educated. Although 69% said they would want to talk to someone about their spirituality if seriously ill, only 3% would choose the physician.

The authors suggest that this study's importance is in directing health providers to include spirituality in their healthcare

model. Many subjects believed that God acts through the physician, that God's will is more important than the provider's skill, and that people do want to discuss their spirituality when seriously ill.

■ *Brett A, Jersild P. "Inappropriate" treatment near the end of life: conflict between convictions and clinical judgment. Arch Intern Med 2003;163:1645–1649.*

This article reviews four common arguments Christians have used to request aggressive medical intervention in end-of-life situations. These are 1) hope that God will grant a miracle, 2) a feeling that every day is a blessing and every moment worth preserving, 3) a faith that one must not give up on God, and 4) a knowledge that there is redemption in suffering. The article provides case studies that clearly illustrate these arguments.

The authors carefully review each of the four arguments and offer alternative religious views from the same tradition that would then allow physicians to limit medical intervention. They acknowledge that when patients and families insist on prolonging life on the basis of religious views, dialogue between patients, families, and physicians can come to a grinding halt and further medical input can be rejected. The authors provide suggestions to help continue the discussion and lead to positive resolution.

Even with these alternatives, the authors note contextual matters that complicate an already difficult situation. The clinician may not share the same religious background as the patient, and it is usually the family interpreting the patient's wishes because the patient is incapacitated. The authors urged clear and complete communication with families and patients, use of clergy when appropriate, validation of the family's feelings, appropriate religious discussions, use of religious ritual to comfort the family, respectfully offering alternative theological arguments, and when necessary, enlist the use of consultants and ethics committees to help resolve the limits of life-sustaining treatment.

■ *Silvestri GA, Knittig S, Zoller JS, et al. Importance of faith on medical decisions regarding cancer care. J Clin Oncol 2003;21:1379–1382.*

The purpose of this study was to examine the influence of a patient's faith on decision making in undergoing treatment for cancer. The authors compare the importance of faith with respect to treatment decisions among doctors, patients, and patient caregivers. The subjects (n = 100 patients with advanced lung cancer), their caregivers, and 257 medical oncologists were asked to rank the importance of the following: cancer doctor's recommendation, faith in God, ability of the treatment to cure disease, side effects, family doctor's recommendation, spouse's recommendation, and children's recommendations. Although all three groups ranked the oncologist's recommendations as the most important factor, there was a discordance regarding the importance of faith in God. Patients and caregivers ranked faith in God as the second most important factor, while the oncologists placed it last. This discrepancy has the potential to create dissatisfaction for all three parties. The authors point out in the discussion that in a resurgence of interest in the relationship between religion and medicine, 84% of Americans believe that God performs miracles, and 48% say they have witnessed one (Woodward K. What miracles mean. *Newsweek* May 1, 2000: 54–60). This is the first study, according to the authors, that describes these differences between patients and physicians. It is clear that patients and their care-

givers are more likely than oncologists to report that they rely on faith in making medical decisions.

Jonas WB, Crawford CC. *The healing presence: can it be reliably measured?* *J Altern Complement Med* 2004;10:751-756.

Although this article does not mention the word miracle, it does describe an attempt to measure a healing presence in an objective and reliable way. The expectation is that this presence is capable of inducing an experience of recovery, wholeness, peace, or well-being in people who suffer. This paper summarizes what healers from various traditions have felt are the primary components of a healing presence. The three top components were love, good intentions, and spiritual grace. The article proceeds by describing two techniques used to measure "healing presence," which included a random event generator (REG) and real-time monitoring of a calcium flux in a cellular model.

The article summarizes some important points about the factors important in a healing relationship, which may be very important as we think about miracles as well. The scientific investigation of the healing presence is in its infancy. The influence of the doctor-patient relationship, the context and meaning in which a treatment occurs, and the expectations and beliefs of both the practitioner and patient are all important. The authors point out, however, that the effects occur outside of cognitive psychosocial processes since healing is said to be spiritual and transpersonal. There is a need to continue to rigorously study these phenomena.

Johnson KS, Elbert-Avila KI, Tulsky JA. *The influence of spiritual beliefs and practices on the treatment preferences of African Americans: a review of the literature.* *J Am Geriatr Soc* 2005; 53:711-719.

It is generally recognized that spirituality is an important part of African-American culture. The authors did an extensive search for studies exploring spiritual beliefs and treatment preferences of African-Americans found in MEDLINE from 1966-February, 2003, Psych Info from 1872-February 2003, and CINAHL from 1982-February 2003. Forty studies met the inclusion criteria, although many of these had methodological limitations, including nonprobabilistic sampling, non-standardized measures, and uncontrolled analyses. Of these forty, 27 addressed spiritual beliefs influencing treatment decisions in the course of an illness, while 13 addressed beliefs specific to the end of life. The themes for those studies addressing illness were the importance of spiritual beliefs and practices in coping with illness, the power of spiritual beliefs and practices to promote healing, the belief that God is ultimately responsible for physical and spiritual health, and the belief that the physician acts as God's "instrument" to promote healing. For those studies addressing preferences at the end of life, two overlapping themes included the belief that only God has the power to decide life and death and a belief in divine intervention

or miracles. The authors also found that African-Americans were more likely than Caucasians to favor life-sustaining treatments, less likely to favor physician-assisted suicide, and less likely to complete advanced directives. The overall theme, which has particular relevance to the topic of miracles, is the belief that life and death rests in the hands of a higher power. The potential for conflict between patients and providers was discussed and the need for mobilizing sources of spiritual support was emphasized.

Sulmasy DP. *Spiritual issues in the care of dying patients: "... it's okay between me and God."* *JAMA* 2006;296:1385-1392.

This article uses the case of a patient with a strong religious belief in a miraculous cure of metastatic pancreatic cancer to explore the spiritual issues that arise in caring for dying patients. The spiritual issues are often ones of meaning, value, and relationship. A spiritual history provides the information about the patient's spiritual and religious background that can guide the assessment and interventions with dying patients. The author discusses some of the issues that may arise in the care of dying patients expecting a miracle. The pleas for a miracle may be associated with a rejection of medical recommendations or the insistence on medical interventions that the medical team may believe to be inappropriate. Tension can arise between patients and care providers in these situations. The author points out that there are no easy solutions. What is clear, though, is that the physician should not reframe or attempt to convince a patient that his/her theology of miracles lacks sophistication. Referrals to experts (ie, chaplains) to have the discussion about scriptural exegesis, the theology of miracles, or to obtain pastoral counseling is needed.

Schottenbauer MA, Rodriguez BF, Glass CR, et al. *Religious coping research and contemporary personality theory: an exploration of Endler's (1977) integrative personality theory.* *Br J Psychol* 2006;97:499-519.

This study examines the ability of personality dispositions to predict religious coping, taking into consideration the perception of the situation and situational anxiety. Religious coping was categorized as both positive (turning to God or fellow parishioners, religious purification, forgiveness, religious helping) and negative constructs (being discontented with God, punishing God's reappraisal, pleading for direct intercession, pleading with God for a miracle). A questionnaire was posted on a web page and the sample consisted of 1,076 participants. Structural equation modeling was employed. Positive personality dispositions were associated with better buffering of negative perceptions of situations in which one did not have control. In low control situations, participants tended to use more religious coping, and in high control situations, participants tended to not use negative religious coping, such as pleading for miracles.