Medicine

Human Life In Utero

Recent developments in fetal surgery have expanded the boundaries of medical science to a threshold that was beyond imagination just decades ago. Combined with the widespread use of prenatal ultrasound, fetal surgery is another intellectual volley in the debate over abortion rights. In simple terms, if the developing fetus is not fully human, there could be no such entity as prenatal surgery. With that in mind, it was with great interest that I reviewed the lead article in the March 17, 2011, issue of the *New England Journal of Medicine*. In "A Randomized Trial of Prenatal versus Postnatal Repair of Myelomeningocele," Scott Adzick and colleagues reported a randomized trial in which they assigned eligible women to undergo either prenatal surgery for congenital myelomeningocele (spina bifida) before twenty-six weeks of gestation or standard postnatal repair. The study was stopped for efficacy of prenatal surgery after the recruitment of 183 patients. The prenatal cohort had a 40 percent rate of brain shunt placement, versus 82 percent in the postnatal group. These fetal surgery patients also had superior rates of mental development and motor function at the age of thirty months. It should be noted, however, that prenatal surgery resulted in a higher risk of preterm birth and uterine dehiscence at delivery. The risk–benefit ratio is therefore up to legitimate discussion.

On a personal note, a colleague's daughter underwent this prenatal procedure some months ago, and so far the outcome seems fairly positive. The conversation that my colleague and I had concerning this dilemma remains fresh in my mind. In the same issue of the *New England Journal of Medicine*, Joe Simpson and Michael Greene offer an editorial on this subject.[1] The editorial recognizes the potential

[1] Joe Leigh Simpson and Michael F. Greene, "Fetal Surgery for Myelomeningocele," *New England Journal of Medicine* 364.11 (March 17, 2011): 1076–1077. Greene is well known for his abortion rights ideology.

benefits of fetal surgery but strongly emphasizes not only the risks entailed but also the psychological status of parents deciding on this new approach. The authors promote what they call "non-directive genetic counseling" and believe that couples who decide not to terminate the pregnancy feel pressured "to do everything possible" and overestimate benefit. Finding hope in a challenging pregnancy seems inherent in human nature. Therefore, one is immediately reminded that a decision to abort a child with spina bifida is devoid of any hope. In the final analysis, the fetal surgery that was investigated by Adzick's research team is full of hope—real hope—and the study serves as a firm reminder of the reality of human life in utero.

Physician–Patient Relationship

In the April 2011 issue of the *Journal of General Internal Medicine*, Wendy Anderson and colleagues presented their original research article "Code Status Discussions between Attending Hospitalist Physicians and Medical Patients at Hospital Admission." Eighty audio recordings of twenty-seven patients' admissions encounters with physicians were obtained and studied. Eleven clinicians discussed code status in nineteen encounters. Patients who are seriously ill should be engaged in a code status conversation, yet only 66 percent of the time did such conversations occur. The median duration of discussion was one minute, and prognosis was discussed in only one encounter. Medical language was preferred over patient-specific scenarios, and no physician expanded on the concept of quantitative estimates of outcome. These quantitative estimates of outcome are often related to the success of cardiopulmonary resuscitation in the particular clinical setting. The authors point out that bioethicists would be disappointed by the outcome of the study, since bioethicists have been educating physicians for years on the central theme of physician–patient communication pertaining to end-of-life events. This article has confirmed something I have known for some time. During my inpatient hospital work, I have made a similar observation and have attempted to improve the content of these critically important discussions. If patients cannot count on their doctors in this area of communication, then at the very least they should have trust in their physicians—a trust that their own welfare is the prime focus of their doctor's efforts. Without this trust, there is little hope that a longer or more information-laden conversation will bring solace to those who are seriously ill.

Effects of Self-Injury Videos on YouTube

It has been argued that a culture that promotes death as a means to end human suffering (via assisted suicide, abortion, euthanasia, etc.) is a culture that will degrade human dignity at every level. Our current societal experience confirms this sad reality. I have often contemplated how this reality drains the source of meaning from many persons' lives. The March 3, 2011, issue of *Pediatrics* reports an objective look at the practice of posting self-injury videos online (S. P. Lewis et al., "The Scope of Non-Suicidal Self-Injury on YouTube"). The research originated from the Departments of Psychology at the University of Guelph and McGill University—both in Canada. Using YouTube's search engine, the researchers found videos under the categories of "self-injury" and "self-harm." Interestingly, the top one hundred videos were viewed over two million times, and most (80 percent) were available to the viewer

audience. About half of the videos were educational or melancholic. Images were often graphic, and 90 percent of non-character videos had self-injury photographs. Cutting was the most common method of injury. Fifty-eight percent of the posted videos were used to warn about this behavior. The authors rightly point out that the nature and content of these videos may lead to normalization of the behaviors and actually reinforce such harmful activity by repeated viewing. I would consider the repeated viewing of graphic self-mutilating events to be like the playing of violent video games, which desensitizes one to such images. Curiosity, especially among the young, can be used both for good or ill. At a deeper human level, I am challenged by the depth and scope of despair encountered by so many in our contemporary society. My practice of medicine has confirmed this reality many times over. A robust evangelistic effort at the most fundamental level to foster the value of every human life is more necessary now than at any other time in history. First and foremost, parents or surrogates must create environments of sacrificial love and not just simple shelters for the most basic human needs and addicted to diversion through means of modern media—a media now driven by social networks and YouTube.

Risks of Long Working Hours

Medical literature has significantly established a link between stress and coronary artery disease. The April 5, 2011, issue of *Annals of Internal Medicine* presents a study titled "Using Additional Information on Working Hours to Predict Coronary Heart Disease: A Cohort Study." Mika Kivimäki and colleagues examined whether information on long working hours improves the ability to use a common risk model, called the Framingham risk model, to predict coronary artery disease in an employed, low-risk population of workers. Baseline examination of a cohort population of 7,095 adults was performed between 1991 and 1993, and these adults were prospectively followed until 2004 for the incidence of coronary artery disease. It was discovered that participants working eleven hours or more a day had 1.67-fold increased risk for coronary heart disease when compared with those who worked seven to eight hours a day. Limitations of the study were identified, including that a high-risk population was not studied and that an independent cohort was not utilized for validation. However, it appears that adding work-hour duration to the Framingham risk score for a low-risk population enhances the entire stratification process. It would be interesting to delve deeper into the data to see how work hours were spent. Is it possible that those with fulfilling work rooted in service to others are not negatively affected by the length of their work day? The virtues of temperance and prudence should lead workers and employers to discourage excessive work hours or workplace stress. A worker disabled by symptomatic heart disease is no longer able to productively add to the common good.

Clinical Judgment

One should hope that a physician always puts the best interest of his patient first when providing medical advice. More recently, it has been debated whether doctors should give their personal judgment to patients or just provide clinical facts devoid of their opinion. Cognitive science is interested in how persons make decisions. I found the April 11, 2011, *Archives of Internal Medicine* article "Physicians Recom-

mend Different Treatments for Patients Than They Would Choose for Themselves" of particular interest (P.A. Ubel, A.M. Angott, and B.J. Zikmund-Fisher). Two representative samples of U.S. physicians (general internists and family practitioners) were presented with one of two scenarios: colon cancer or avian influenza. Both scenarios had two treatment options, one of which offered a superior chance of survival for fatal illness but at the cost of experiencing unpleasant adverse effects. The physicians were randomized to indicate which treatment they would choose if they were the patient or if they were the physician recommending treatments to a patient. In both situations, physicians chose options which gave themselves a lower survival rate than they gave their patients. In other words, they recommended interventions for their patients that were more likely to ensure their patients survival opposed to their own. This was not thought necessarily to be due to any overt conscious choice. The authors point out that decision making is often influenced by "betrayal aversion"—the feeling that harm caused by something intended to avoid harm is worse than the same harm that does involve such betrayal. This research does not prove that physicians always make better decisions for others than they would make for themselves. The multiple factors that go into making a clinical decision could not be addressed in this singular study. When teaching ethics courses to medical students and residents, I have often advocated a position that physicians should declare a clinical judgment rather than present multiple treatment options with survival data and adverse reaction percentages. A patient still has the autonomous right to accept or refuse treatment, but in this way the clinician has discharged his professional duty to give advice. This is not paternalism, but rather a basic human obligation to stand in solidarity with others.

Reduction in Working Hours

News reports confirmed that recently several air traffic controllers fell asleep during their assigned work shift. Understandably, the public's response was one of deep concern. I have wondered if a similar reaction would occur if there were greater awareness of the work hours endured by physicians in training. In recent years, credentialing bodies have enforced limits on work hours for physicians engaged in postgraduate medical education. Setting definite work-hour limits, however, may challenge tenets of medical professionalism by requiring doctors to abandon the bedside to comply with work-hour rules. Exceptions to work-hour limits do exist but must be well documented, be related directly to the goods of education, and occur rarely. Balancing the tension between professionalism and compliance with the rules is a challenge for residency directors throughout the country. I certainly would argue that the work and the rest needs of residents need to be well balanced. In that regard, the article "Impact of Reduction in Working Hours for Doctors in Training on Postgraduate Education and Patients' Outcomes: Systematic Review," published in the March 22, 2011, issue of the *British Medical Journal*, was of interest to me (S.R. Moonesinghe et al.). Seventy-two studies relating to work-hour limits were reviewed: thirty-eight of the studies reported training outcomes, thirty-one reported patient outcomes, and three reported both. The authors concluded that a reduction in working hours to no more than eighty hours per week did not adversely affect patient safety and did not encumber educational goals. Of note, legislation now exists

in Europe to limit working hours to no more than fifty-six hours per week, and in some situations to even fewer. This has not been fully studied. A patient's desire for a steady and familiar hand in the middle of the night and the need for that hand to be rested and alert will continue to play out in postgraduate education programs. At the end of the day, methods to enhance professionalism and to support the profound dedication of the physician to his patient should be encouraged. Innovative ideas to achieve this balance are very much needed.

Medical Professionalism

In previous reviews, I have discussed medical professionalism and its characteristics and challenges. An opinion piece, "Professionalism in the Digital Age," in the April 19, 2011, *Annals of Internal Medicine* is worthy of attention. Arash Mostaghimi and Bradley Crotty stress that physicians must take a professional approach in the digital age to maintain confidentiality and honesty and trust in the medical profession. Recognizing that the doctors' ability to use online social networks, blogs, and various social media sites should be preserved, the authors propose a "dual-citizenship" approach to the Internet, which separates one's public and private profiles. The authors stress that physicians should maintain a degree of privacy in certain aspects of their lives outside of their professional responsibilities. That is clearly a reasonable proposal, but I would counter-argue that there are limits to separating the private and public lives of professionals. It takes no expert in human nature to know that virtues and vices that are habituated in private will eventually, and profoundly, influence the behaviors of a person publically. In the end, a professional's private life should be as well as ordered as possible to prevent any contamination of one's public performance.

Herpes Simplex Virus

What is hidden in the dark will be brought to the light. This statement is true both of spiritual matters and in the natural course of human lives. The April 13, 2011, issue of the *Journal of the American Medical Association* features an article titled "Genital Shedding of Herpes Simplex Virus among Symptomatic and Asymptomatic Persons with HSV-2 Infection" (E. Tronstein et al.), which serves as a reminder of the realities that are "hidden in darkness." I have been confronted with this in my medical practice, in interpreting serologic blood tests for sexually transmitted diseases between spouses. The article discussed a cohort of 498 immunocompetent HSV-2 seropositive persons who were studied prospectively for genital shedding of the HSV-2 virus, the virus that causes genital herpes. Genital swabs were analyzed for HSV DNA virus using realtime polymerase chain reaction technology. Approximately 20 percent of patients with symptomatic genital herpes were found to be adequately shedding virus during studied days. However, 10.2 percent of patients without clinical signs of disease but with positive blood testing were also found to shed the virus. One can easily see how the disease can be spread by patients who are either unaware of its presence or confident that they will not endanger others because of the lack of clinically evident disease or lesions.

The authors point out that condom use, daily antiviral medication, and disclosure of herpes blood testing results could reduce the risk for disease transmission. Of

course these recommendations are inadequate, and the authors also acknowledge that the positivity rate has not diminished in recent years, although these recommendations have been promoted for decades. I would add that better formation of sexual ethics would be more effective than wider availability of condoms and "sexual education" programs. An ethic based on the psychological and physical benefit of chastity would be far more effective in reducing the incidence of genital herpes than a program that does not recognize the profound dignity of the sexual act.

Do-Not-Resuscitate Orders

Clinicians have debated in recent years the applicability of do-not-resuscitate (DNR) orders for patients in the operating room and for those who are immediately postoperative. Surgeons and anesthesiologists argue that the perioperative time frame is unique and that rapid deterioration in a patient's hemodynamic status should always be treated in these settings. Those who advocate for patient autonomy argue that a DNR order should be maintained irrespective of the medical or surgical circumstances. How patients fare with both surgery and a DNR order is of great clinical interest. The *Archives of Surgery* report on the outcomes of patients who undergo surgery with a do-not-resuscitate order (H. Kazaure, S. Roman, and J. A. Sosa, "High Mortality in Surgical Patients with Do-Not-Resuscitate Orders: Analysis of 8256 Patients," April 18, 2011). This retrospective cohort study matched equal numbers of patients who were the same age and who were undergoing the same surgical procedure; the only variable was the DNR status. Outcomes studied included postoperative complications, reoperation rates, and death within thirty days of surgery. The length of stay and operative time were also examined. Most patients with a DNR order were elderly white women. These patients had higher complication rates (26.4 versus 31 percent) and mortality (8.4 versus 23.1 percent). Even after risk adjustment, DNR assignment remained an independent risk factor for mortality. One can speculate on the statistical connection, and that is a good place to start. Are patients with a DNR order managed differently in an overt or even subluminal way as to affect outcome? Is one's personal will to survive a major factor in outcome? Further study is required to understand the causality of these findings and their ethical and moral significance.

Conscientious Objections

I have often been critical of editorial perspectives and opinion pieces that appear in major medical journals. I have now found an exception! Douglas White and Baruch Brody present their commentary "Would Accommodating Some Conscientious Objections by Physicians Promote Quality in Medical Care?" in the *Journal of the American Medical Association*.[2] A number of physician organizations and political action groups have advocated that physicians subsume their moral objections to procedures, such as abortion, in favor of patient autonomy and legal precedent. The

[2]Douglas B. White and Baruch Brody, "What Accommodating Some Conscientious Objections by Physicians Promote Quality in Medical Care?" *Journal of the American Medical Association* 305.17 (May 4, 2011): 1804–1805.

authors point out that there are a number of reasons why a physician's conscience should be protected. They suggest that prohibiting conscience-based refusals may negatively influence the type of persons who enter medicine. Moreover, suppressing conscience-based refusals can diminish a physician's professional sense of duty, promote a physician's "callousness," encourage a physician's intolerance to patients' moral beliefs, and threaten a physician's loyalty and fidelity to the professional responsibilities in face of their own unfaithfulness to their core moral standards by external pressure. The authors state that "viewing the issue from a societal perspective and conceptualizing medical quality as a public good allows a more robust understanding of the relationship between conscience-based refusals and quality medical care." The authors failed to make the assertion that many clinicians who do not cooperate in certain medical acts do so because they believe them to be truly harmful to the patients whom they are trying to help. This editorial is dead-on correct, however, in its analysis in its other points. If we as physicians suspend our deeply held beliefs in the dignity of human persons and in moral acts, many of which are based on the natural law and classical medical ethics, then we are all at risk for deeply compromised and less "humane" practice of medicine. This editorial should be required reading for all those involved in the current political debate on the legal protection of conscience for health care workers.

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