Edward Reichman

Edward Reichman is an Associate Professor of Emergency Medicine at Montefiore Medical Center and Associate Professor of Philosophy and History of Medicine at the Albert Einstein College of Medicine of Yeshiva University, where he teaches Jewish medical ethics. He received his rabbinic ordination from the Rabbi Isaac Elchanan Theological Seminary of Yeshiva University.

DON'T PULL THE PLUG ON BRAIN DEATH JUST YET

In this issue of *Tradition*, Dr. J. Kunin reviews the medical literature relating to the anatomical and physiological studies of the brain dead patient. Based on the medical evidence that there remain both physiological function and some anatomical integrity of the brain in these patients, he argues that the original halakhic legal decisions accepting brain death as halakhic death need to be re-analyzed and possibly retracted.

The notion of persistent physiological function in the brain dead patient has been acknowledged anecdotally in the halakhic world for over a decade,[1] but Dr. Kunin's essay is an updated and systematic review of the medical literature. While this type of research requires careful attention and further analysis, I would not be so quick to pull the plug on the halakhic acceptance of brain death.

I will not revisit the brain death debate here, nor will I discuss the merits of or advocate for any particular position. My objective is simply to clarify that those who initially accepted brain death as halakhic death, primarily Rav Moshe Feinstein[2] and the Israeli Chief Rabbinate,[3] could still maintain their respective positions in light of the most current scientific literature. Those who oppose the brain death definition do not do so based on different medical assumptions, but rather based on different halakhic analyses.

In the field of contemporary medical halakha, it is not only preferable, but mandatory, to reevaluate the state of medical science when practically applying any legal decisions of the past. Medicine is an evolving science, and our understanding of the human body is continually expanding.[4]

TRADITION 38:4 / © 2004
Rabbinical Council of America

When comparing pre-modern medicine to contemporary medicine, the paradigm shifts are many, and yesterday's scientific dogma may be today's folly. There are numerous passages in rabbinic literature ranging chronologically from the Talmud to pre-modern responsa that appear to be based on erroneous medical information.[5] The analysis of these passages has received great attention in the modern scientific era, spawning many articles and treatises, even leading to the banning of books.

However, the obligation to update medical knowledge applies equally in the modern scientific era. For example, in the 1960's, a number of rabbinic authorities forbade living kidney donation due to the unacceptable halakhic risk to the donor.[6] To apply those responsa today without reevaluating the medical literature would be a misapplication of halakha. The surgical risks need to be reassessed based on current scientific data before a new decision can be rendered. After decades of surgical experience with live organ donation, the risks to the kidney donor have been minimized, and statistically quantified as such. Indeed, based on this updated medical data, not a single contemporary rabbinic authority forbids live kidney donation. While the result of this analysis is the reversal of the decision from restrictive to permissive, in this case, the halakhic analysis remains sound. The halakhic decision process remains valid, and is not reversed; rather, one need only apply the new statistics to the preexisting halakhic framework or formula. Had the authorities that initially forbade organ donation been presented with the current medical literature, they would have decided differently.[7]

In the case of brain death, Dr. Kunin argues based on current scientific literature that there should likewise be a reversal of a decision. In this case, however, if Dr. Kunin's presumption were correct, the reversal would be on halakhic, not medical grounds. He contends that the original halakhic analysis is invalid, as it was based on erroneous medical information. Consequently, it should be rescinded. Such a reversal is a far more complicated matter. Under what circumstances, if any, a halakhic decision can be reversed if based on erroneous medical information is a matter of intense debate. If the original decision is authored by a later authority (*aharon*), reversal would be less theologically complicated, but nonetheless no simple matter. If indeed it is determined that the sole basis for a decision is a medical fact which we now know to be erroneous, then *poskim* of great stature should determine whether to rescind or retract the original decision.

But before we activate this theological pathway of possible reversal of a halakhic decision in the case of brain death, we must determine

with certainty that the halakhic decision under consideration is indeed based on the supposedly erroneous medical facts. Stated differently: Would the author of the original decision change his opinion if presented with the current medical information?

Dr. Kunin focuses entirely on one peripheral dimension of the basis of the halakhic acceptance of brain death criteria—the passage in Mishna *Ohalot* (1:6) and the principle of physiological decapitation—but neglects the primary dimension—the passage in Talmud *Yoma* (85a) and the criterion of irreversible cessation of respiration.

A review of the responsum of R. Moshe Feinstein that details his position on the definition of death[8] reveals that there is one major criterion for the determination of death: irreversible cessation of spontaneous respiration. In a patient who develops brain death from natural (non-traumatic) causes, if repeated observation reveals no spontaneous breathing, the patient can be declared dead *without any further testing at all.*

In the case of traumatic injury (e.g., car accident), R. Feinstein was concerned that the clinical observation of the absence of spontaneous respiration might be insufficient, and in this specific case, required corroborative evidence that the brain was not still controlling respiration. He mentions, in this context, the performance of medical tests that determine that the brain is not connected to the body, and that the brain is completely destroyed (*nirkav le-gamrei*). He compares this to the Mishnaic decapitation and requires, as a *humra* in this particular circumstance, the performance of brain death protocols.

Dr. Kunin's article addresses this last point, citing medical literature that despite the diagnosis of brain death, there is still a physiological connection to the brain, and furthermore, the brain does not completely disintegrate, rather, some anatomic integrity is preserved. I would not argue against the scientific validity of this literature. The research appears scientifically sound, and as a whole, irrefutable. The substantive issue in this case is the relevance of these studies to the validity and perpetuity of the decisions of R. Feinstein and the Israeli Chief Rabbinate to accept brain death as halakhic death.

As mentioned above, it is clear from the text of R. Feinstein's responsum that there is one major criterion for the determination of death: irreversible cessation of spontaneous respiration. Is this criterion still true today in the brain dead patient, based on current science? The answer is a categorical yes. While varying percentages of patients may have ongoing, recorded physiological function or brains that remain partially anatomically intact, ALL (100%) of these patients have no

spontaneous respiration, and if disconnected from the ventilator, NONE (0%) of these patients will breathe spontaneously. While there are no universally accepted and uniformly applied clinical criteria for the determination of brain death, all definitions include irreversible cessation of independent respiration as an absolute requirement.

Does the new medical literature affect the corroborative value of brain death testing in the case of traumatic injury to determine with medical certainty the death of the patient?

While R. Feinstein does not explicitly address this, it can be argued that the requirement for physiological decapitation is relevant only to the functions that preserve or define life. According to R. Feinstein, respiration is the primary function that defines life, as established in Talmud *Yoma* (85a). With respect to respiration, there is indeed physiological decapitation in the brain dead patient. There is complete and utter dissociation of the brain and the body with respect to the function that halakhically matters. Granted, there may be persistent physiological function, and as Dr. Kunin correctly asserts, "some of the homeostatic mechanisms of the brain in brain dead patients may continue to function for long periods."[9] However, this function is of no halakhic significance and may be the modern analogue to the tail of the lizard. The sole purpose of the protocol is to confirm irreversible cessation of respiration, not to verify that all possible measurable physiological functions have ceased. These functions, while clearly present, are of no halakhic consequence.

Dr. Kunin states that:

> Inexplicably, however, neither Wijdicks in his 2001 *New England Journal of Medicine* article on the diagnosis of brain death, nor in any other published criteria of brain death are cessation of autonomic functions of the brain listed as criteria for the diagnosis even though evidence of ongoing homeostatic function contradicts the assertion the whole brain has been destroyed.[10]

It is not at all inexplicable. The observation of "ongoing homeostatic function," while a curious medical finding, is of no clinical (or halakhic) relevance. Quite the contrary, the fact that Dr. Wijdicks, the author of the definitive paper on the clinical definition of brain death, conspicuously omits any requirement for cessation of autonomic functions despite his own observations of their existence, strongly attests to their clinical irrelevance.

Furthermore, the complete necrosis (i.e., destruction) of the brain was never a requirement of R. Feinstein or the Chief Rabbinate, and nei-

ther in the writings of R. Feinstein, nor in the expanded protocols for brain death enumerated by the Chief Rabbinate, is complete destruction of the brain a requirement for the diagnosis of death. The criteria are functional (clinical) and not anatomical. When cardiac death is declared, there is no halakhic requirement that there be complete (or any) destruction (necrosis) of the cardiac muscle tissue. The absence of complete destruction of the brain in brain dead patients in no way affects their halakhic decisions. In fact, the brain as an organ is not mentioned in the Talmud or *Rishonim* concerning the definition of death. The brain death protocols are added by R. Feinstein and the Chief Rabbinate only to verify that respiration has stopped, completely and irreversibly.

Dr. Kunin cites extensively from rabbinic authorities who have always rejected the brain death criteria. These *gedolei* Torah are very concerned with the requirement of complete and utter physiological dissociation of the brain and the body. While the absence of this complete physiological decapitation was a major impediment for these *gedolim* to the acceptance of the brain death criteria,[11] it would not in any way impact the decisions of R. Moshe and the Chief Rabbinate. Dr. Kunin's discussion should deal exclusively with the authorities that accepted the brain death criteria. An analysis of the authorities that reject brain death criteria merits its own detailed analysis, but is not relevant here. The official decision of the Chief Rabbinate, as the decision of R. Feinstein, rests primarily on the sole requirement of irreversible cessation of respiration. The case in *Ohalot* (1:6) and the brain death protocol are only used in service of this primary criterion and still remain intact despite the advances in the physiological and anatomical understanding of the brain dead patient.

In conclusion, after reading Dr. Kunin's article, one might erroneously conclude that he has removed the medical underpinnings and halakhic foundations of the earlier decisions of Rav Moshe Feinstein and the Chief Rabbinate of Israel accepting brain death as halakhic death. Would the authors of the original decisions maintain their opinion if presented with the current medical information? I believe the answer to be yes. In short, the halakhic position that accepts brain death is still very much alive. While there is no consensus in the halakhic world about whether brain death constitutes halakhic death, there still remains healthy debate in the spirit of *elu ve-elu divrei Elokim hayyim*.

NOTES

I would like to thank Rabbi Dr. Howard Apfel, Rabbi Yitzchak Breitowitz, Dr. Robert Schulman and Rabbi Dr. Avraham Steinberg for reviewing the manuscript and providing valuable suggestions. The aforementioned do not necessarily share the views of the author. I take sole responsibility for the content of this essay.

1. Simcha Bunim Lazerson, *Mishnat Hayei Sha'ah* (Jerusalem: 1994); Moshe Dovid Tendler, *Responsa of Rav Moshe Feinstein: Care of the Critically Ill* (Hoboken, NJ: Ktav, 1996); Abraham S. Abraham, *Nishmat Avraham*, v. 2, *Yoreh De'ah* (New York: Mesorah Publications, 2003).
2. A number of authorities interpret the responsa of Rav Moshe Feinstein differently, and maintain that he never accepted the brain death criteria. This position has been debated extensively in the halakhic corpus on brain death. This essay does not address this position. Dr. Kunin obviously accepts the fact that Rav Moshe indeed accepted brain death as halakhic death.
3. For an annotated, full text of the decision of the Chief Rabbinate Council, see "[Brain Death and] Heart Transplants: The Israeli Chief Rabbinate's Directives," trans. Yoel Jakobovits, *Tradition* 24:4 (1989): 1-14.
4. For the application of a medical historical analysis to the halakhic definition of death, see E. Reichman, "The Halachic Definition of Death in Light of Medical History," *Torah U'Madda Journal* 4 (1993): 148-174, reprinted in D. Shatz and J. B. Wolowelsky, eds., *Mind, Body and Judaism: The Interaction of Jewish Law with Psychology and Biology* (Jersey City: Ktav, 2004).
5. D. Frimer, "The Determination of Fatherhood Utilizing Blood Tests in Israeli Law and *Mishpat Ivri*," [in Hebrew] in M. Halperin, ed., *Sefer Assia* 5 (Jerusalem: Makhon Schlesinger, 1986), 38-44; D. Cohen, "*Shinuy Hateva*: An Analysis of the Halachic Process," *Journal of Halacha and Contemporary Society* 31(Spring 1996): 38-61; Neria Gutal, *Sefer Hishtanut ha-Teva'im be-Halakha* (Jerusalem: Makhon Yahdav, 1998); A. Steinberg, (F. Rosner, trans.), *Encyclopedia of Jewish Medical Ethics* (Jerusalem: Feldheim, 2003), s.v. "Change in Nature."; M. Halperin, "Science and Medicine in the Talmud: Tradition or Reality?" [in Hebrew] *Assia* 71-72 (2003): 90-102; Yehuda Levi, *The Science in Torah: The Scientific Knowledge of the Talmudic Sages* (Jerusalem: Feldheim, 2004); Dr. Martin Ellis, "More on Science and Medicine in the Talmud," [in Hebrew] *Assia* 73-74 (2004): 184-85.
6. Rabbi Eliezer Waldenberg, *Tsits Eliezer* (Jerusalem, 1985), 9:45; Rabbi Yitshak Yaakov Weiss, *Minhat Yitshak* (Jerusalem: Makhon Hatam Sofer, 1975), 6:103.
7. Rav Waldenberg, in his *Tsits Eliezer* (op. cit.), explicitly allows for the possible subsequent reversal of his decision by adding, that if, at a later date, physicians attest to the greater safety of live kidney donation, it would be permitted.
8. *Iggerot Moshe*, *Yoreh De'ah*, part III, chapter 132.

9. Joshua Kunin, "Brain Death: Revisiting the Rabbinic Opinions in Light of Current Medical Knowledge," *Tradition* 38:4 (Winter, 2004): 48.
10. Ibid., 51-52.
11. According to Rav Elyashiv, even if there were total physiological decapitation, and the brain were completely destroyed in the brain dead patient, it would not alter his position that a person is still halakhically alive as long as there is cardiac function.