CORRESPONDENCE

An Unconscious Patient with a DNR Tattoo

TO THE EDITOR: We present the case of a person whose presumed code-status preference led him to tattoo "Do Not Resuscitate" on his chest. Paramedics brought an unconscious 70-year-old man with a history of chronic obstructive pulmonary disease, diabetes mellitus, and atrial fibrillation to the emergency department, where he was found to have an elevated blood alcohol level. The staff of the medical intensive care unit evaluated him several hours later when hypotension and an anion-gap metabolic acidosis with a pH of 6.81 developed. His anterior chest had a tattoo that read "Do Not Resuscitate," accompanied by his presumed signature (Fig. 1). Because he presented without identification or family, the social work department was called to assist in contacting next of kin. All efforts at treating reversible causes of his decreased level of consciousness failed to produce a mental status adequate for discussing goals of care.

We initially decided not to honor the tattoo, invoking the principle of not choosing an irreversible path when faced with uncertainty. This decision left us conflicted owing to the patient's extraordinary effort to make his presumed advance directive known; therefore, an ethics consultation was requested. He was placed on empirical antibiotics, received intravenous fluid resuscitation and vasopressors, and was treated with bilevel positive airway pressure.

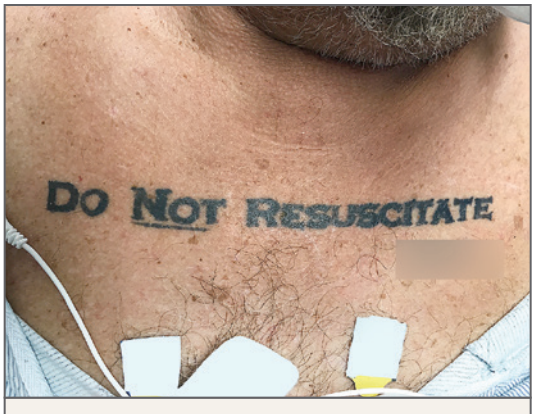

Figure 1. Photograph of the Patient's Tattoo Entered into the Medical Record to Document His Perceived End-of-Life Wishes.
This patient's presumed signature has been masked.

After reviewing the patient's case, the ethics consultants advised us to honor the patient's do not resuscitate (DNR) tattoo. They suggested that it was most reasonable to infer that the tattoo expressed an authentic preference, that what might be seen as caution could also be seen as standing on ceremony, and that the law is sometimes not nimble enough to support patient-centered care and respect for patients' best interests. A DNR order was written. Subsequently, the social work department obtained a copy of his Florida Department of Health "out-of-hospital" DNR order, which was consistent with the tattoo. The patient's clinical status deteriorated throughout the night, and he died without undergoing cardiopulmonary respiration or advanced airway management.

This patient's tattooed DNR request produced more confusion than clarity, given concerns about its legality and likely unfounded beliefs[1] that tattoos might represent permanent reminders of

THIS WEEK'S LETTERS

regretted decisions made while the person was intoxicated. We were relieved to find his written DNR request, especially because a review of the literature identified a case report of a person whose DNR tattoo did not reflect his current wishes.[2] Despite the well-known difficulties that patients have in making their end-of-life wishes known,[3-5] this case report neither supports nor opposes the use of tattoos to express end-of-life wishes when the person is incapacitated.

Gregory E. Holt, M.D., Ph.D.
Bianca Sarmento, M.D.
Daniel Kett, M.D.
Kenneth W. Goodman, Ph.D.
University of Miami
Miami, FL
gholt@miami.edu

Disclosure forms provided by the authors are available with the full text of this letter at NEJM.org.

1. Lande RG, Bahroo BA, Soumoff A. United States military service members and their tattoos: a descriptive study. Mil Med 2013;178:921-5.
2. Cooper L, Aronowitz P. DNR tattoos: a cautionary tale. J Gen Intern Med 2012;27:1383.
3. Kaldjian LC, Erekson ZD, Haberle TH, et al. Code status discussions and goals of care among hospitalised adults. J Med Ethics 2009;35:338-42.
4. Yung VY, Walling AM, Min L, Wenger NS, Ganz DA. Documentation of advance care planning for community-dwelling elders. J Palliat Med 2010;13:861-7.
5. Teno J, Lynn J, Wenger N, et al. Advance directives for seriously ill hospitalized patients: effectiveness with the patient self-determination act and the SUPPORT intervention. J Am Geriatr Soc 1997;45:500-7.

DOI: 10.1056/NEJMc1713344

Emicizumab Prophylaxis in Hemophilia A with Inhibitors

TO THE EDITOR: In the trial of emicizumab prophylaxis in hemophilia A with inhibitors, Oldenburg et al. (Aug. 31 issue)[1] report the occurrence of thrombotic microangiopathy (TMA) in three patients receiving concurrent therapy with the bypassing agent activated prothrombin complex concentrate (FEIBA, Shire) for breakthrough bleeding. (Two of these patients also received the bypassing agent recombinant activated factor VII [factor VIIa], but no events occurred after treatment with recombinant factor VIIa alone.) Acknowledging "scant" evidence, the authors conclude that events of TMA were associated with "high cumulative doses" of activated prothrombin complex concentrate and that associated "toxic effects" may limit the usefulness of combination therapy.

No events of TMA were observed during trials of FEIBA prophylaxis,[2,3] were reported during more than 40 years of real-world experience (Shire internal data), or resulted from the combined sequential use of FEIBA and recombinant factor VIIa for severe refractory bleeding.[4] We surmise that the risk of TMA arises from new interactions between emicizumab and FEIBA.

Only FEIBA and recombinant factor VIIa are approved for the management of acute bleeding in hemophilia A with inhibitors, and the response to bypassing therapy is often unpredictable and variable, as evidenced by the fatal bleeding that occurred in an emicizumab-treated patient after 11 doses of recombinant factor VIIa.[1] Research is needed to elucidate the risk of TMA and to develop and validate strategies to treat inevitable events of breakthrough bleeding.

Louis M. Aledort, M.D.
Icahn School of Medicine
New York, NY
louis.aledort@mountsinai.org

Bruce M. Ewenstein, M.D., Ph.D.
Shire
Cambridge, MA

Dr. Aledort reports serving on the data and safety monitoring board of Baxalta (now part of Shire) and receiving consultancy fees and honoraria from Baxalta; and Dr. Ewenstein, being a full-time employee of Shire. No other potential conflict of interest relevant to this letter was reported.

1. Oldenburg J, Mahlangu JN, Kim B, et al. Emicizumab prophylaxis in hemophilia A with inhibitors. N Engl J Med 2017;377:809-18.
2. Leissinger C, Gringeri A, Antmen B, et al. Anti-inhibitor coagulant complex prophylaxis in hemophilia with inhibitors. N Engl J Med 2011;365:1684-92.
3. Antunes SV, Tangada S, Stasyshyn O, et al. Randomized comparison of prophylaxis and on-demand regimens with FEIBA NF in the treatment of haemophilia A and B with inhibitors. Haemophilia 2014;20:65-72.
4. Schneiderman J, Rubin E, Nugent DJ, Young G. Sequential therapy with activated prothrombin complex concentrates and recombinant FVIIa in patients with severe haemophilia and inhibitors: update of our previous experience. Haemophilia 2007;13:244-8.

DOI: 10.1056/NEJMc1712683

TO THE EDITOR: Oldenburg et al. report that emicizumab prophylaxis in hemophilia A with inhibitors was associated with a significantly lower