Commentary

A letter to Michel: Revisiting the Intent of Medicine in the Covid19 Era

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«Dear Michel,

You will never read this letter, inspired by another letter.[1] It is a *description*, a *reminder*, and an *apology* for all you have been through in the tough environment of the Intensive Care Unit (ICU), where we fought together to keep you alive.

The first time we saw you was one morning in October 2021, when you crossed the door of the ICU because your lungs had been seriously infected by Covid19. You were intubated and we kept you sedated so that you would not feel discomfort and be able collaborate with the ventilator. The physician on duty decided that you needed ventilatory support and considered that you could overcome Covid despite your diabetes mellitus, arterial hypertension, coronary disease, chronic obstructive pulmonary disease, ascending aortic aneurysm or your 88 years of age. He informed us that your medical problems were well controlled, without specifying, to what extent, since in our hospital and throughout Greece, we do not apply the Clinical Frailty Score or other frailty scales used by the medical community, to determinate which patients will benefit and which will not.[2,3]

The first thing we did when you came in was to remove your clothes in order to place catheters into your veins and arteries for administering medication and measuring your blood pressure, insert a tube through your nose for giving you food, install a catheter in your bladder, take your temperature from the rectum, monitor your heart, oxygen levels, etc. Then, we drew blood and other biologic fluids in order to evaluate the physical condition of your body. Finally, we started medication, more than 20 drugs per day. Dear Michel, we violated the autonomy of your body multiple times, which we wouldn't have been able to do under other circumstances, and conducted those painful, bloody, or even risky interventions on your body because we were convinced that we were helping you.

You stayed in the ICU for 61 days. Ten days after admission, we performed a tracheostomy, opening a hole in your neck because you were not able to breathe normally. We gave you blood repeatedly, and the catheters in your body were replaced even more often. We drew blood every day and punctured your hands and thighs regularly to check for any blood infection. We cleaned you, washed you, combed your hair. At some point we lightened up because you were breathing on your own and we were not giving you any sedation medication. Those were the best moments I spent with you, even if they were so few. It was because you could understand our words, you had become a human being again. One day, when I suggested switching on the TV so that you would have "company", you gave a grimace of disgust, and every time I held your hand you wouldn't let it go, because that was your real company, a human hand. The same was reported by the nurses, who spent much more time with you and had become your friends. You needed them to hold your hand. We only remember you smiling once, when we told you to look at a sparrow sitting on your window.

But, since then, nothing has gone right. A tracheostomy complication, - "subcutaneous emphysema"- disfigured your face and body so much that we didn't recognize you the following day. We had to insert one more tube, this time in the lung, and sedate you again. However, your kidneys and your heart worse, and that the ventilator gave you your last breath at 5.20 a.m..

This story give rises to a series of difficult questions, Michel. In your case, what was the purpose of the medical interventions? Was it to bring you back to your pre-admission condition? Was it to alleviate your breathing? Was it to transfer oxygen to your organs? Was the decision to place you in the ICU the correct decision, given that you suffered so much for so long and you died at the end? Should we have considered the option of not intubating you and not transferring you into the ICU?[4] Would it have been better if you had stayed in the clinic receiving palliative care with your loved ones around? Is it possible that everything that was done was medical futility?[5,6] Should we re-visit the goals of medicine and go back to where we started from, Hippocrates' thinking, where medicine is defined as:

> "the complete removal of the distress of the sick, the alleviation of the more violent diseases, and the refusal to undertake to cure cases in which the disease has already won the mastery, knowing that everything is not possible to medicine. . . . A man who thinks that a science can perform what is outside its province, or that nature can accomplish unnatural things is guilty of ignorance more akin to madness than to lack of learning".[7]

Obviously, answers are not easy, and our way of thinking makes them more difficult. Medicine has a long way to go in order to become a true science that not only explains *ex post* but also predict in advance.

Your case reminds us of the limits of medicine. When should interventions start and when should efforts stop? We find it difficult to make decisions, not only for ethical reasons, but for scientific ones, because of our inability to uncover the causes of disease and the laws governing them,

so we cannot predict precisely what is going to happen in each case. We cannot even be sure about exact mortality rates, although recent estimate have strikingly revised Covid19 as cause of death worldwide from 5.94 to 18.2 million for the years 2020-21.[8]

Medicine, Michel, not having any strict natural laws, tries to make predictions using statistical laws. A useful tool that has helped to find causal relations, such as that smoking increases the probability of lung cancer,[9] statistical laws cannot answer the questions what is going to happen to the specific individual who is a smoker or whether Covid19 will end up being fatal or insignificant for a specific person. And we have known for a while that statistical association between two facts does not entail causation,[10] while we often forget that the "average change combines both patients who respond and those who do not", and any change resulting from the statistical study of a small group of patients, and it is not about you.[11] Statistics, Michel, studies you as if you were a number and not a human, and we know that when the numbers extrapolating from research to the target populations there are great problems.[12] But you are a unique case, 100% special; you are not part of any controlled experimental study or statistical average. Still, medicine cannot resolve the distinction between experimental studies and clinical practice. It just considers that every human body is governed by a universal biologic response, Randomized Controlled Trials (RCTs) cannot always predict a body's response.[13] Medicine, Michel, tries unsuccessfully to mimic the clean findings of physics or chemistry.

Dear Michel, we never heard your voice. We didn't learn if you had children or grand children, or where you lived, or what was valuable to you. Your loved ones never saw you again once you were admitted in the hospital. They didn't hold your hand as we did, they didn't have the chance to say "good-bye". Even at your funeral, they did not see your face for the last time, because doctors think the dead can pass the virus, as if they were still breathing

Your loss made us sad, not only because we have not managed to keep you alive, but also because we did not take into account the requirements of Evidence Based Medicine – EBM: we did not take into account your desires, nor even the available evidence in literature. We only relied on the opinion of one physician who decided, alone, to intubate you and send you to our intensive care unit.[14]

By this letter, we want to apologize for various reasons: for not having discussed with you and your family the potential implications of intubation and ICU admission and other available options; for not having worked as a team (doctors, nurses and other supporting specialties) in order to make collectively the best possible decision for you, with you; for not having applied ICU admission criteria to help only those who can benefit, rather than betting on a blind chance, as if life and death were the flipping of a coin; for having broadened the admission criteria so much that we are supporting mechanically people who have reached their biological end.[15]

We apologize because medicine consciously turns healthy people into patients and generates overdiagnosis and other silent medical pandemics.[16] We apologize because our intervention was futile, and we know quite well the admonishment from the BMJ's Too Much Medicine Initiative. We never considered how much is too much. (https://www.bmj.com/too-much-medicine). We apologize because medicine considers that aging or lung infection, when we are dying, is a medical condition requiring extreme medical interventions and not a normal process of life that we ought to accept; because it constantly advocates medical interventions, while underestimating the harmful effects[17]; because the interests of pharmaceutical companies can corrupt the evidence used for making sound decisions[18]; we apologize for trying to appear as heroes in the eyes of patients and society and claiming credit for extending life expectancy, although we know that life expectancy in 1940 was 65 years and medicine has offered, maybe, only 5 years of the 80 years that is the current life expectancy in the West[19]; we pride ourselves, while at the same time we don't seem to care about the neglected diseases affecting more than 1 billion people.[20]

Dear Michel, we apologize for being convinced even today, after your death, that all intervention were for your benefit. We apologize because medicine has not given a final answer to the question "what is (are) the goal(s) of medicine".[21] We apologize for telling you that everything would be fine and you would go back home and for having been proven wrong. We were wrong, maybe, because we did not inform you about the potential implications of intubation and mechanical ventilation, because we did not ask you what exactly you would like to be offered in the hospital. It would be better for you if a group of doctors from different medical specialties participated in the discussion about your case (Intensivist, Palliative Care Physician, Anesthesiologist, etc.), your prognosis would be more accurate and better documented. In addition, your participation (and that of those close to you) in the discussion would have revealed to us your values, priorities, and preferences, and we would have obtained your informed consent; the experience of other medical specialists would be of great help[2,3]; as would an early briefing with your personal physician on the issue of medical futility so that you would have been prepared for difficult decisions.

Dear Michel, medicine is human and, as such, it may make mistakes. I hope that in the future, medicine will improve its prognostic abilities in order to reduce errors as much as possible and become not only more scientific but also more humane. So, good bye and *au revoir*".

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