A complicated case of cytomegalovirus viremia: "What would you do doctor?"

BY SALMAN WAQAR, VASANT RAMAN AND THOMAS CUDRNAK

Mrs W walked gracefully into my urgent care clinic. It was another busy session and I hoped she did not have anything serious going on which might slow the clinic further. She was an elegant 72-year-old lady who seemed like the sort of person who had always led her life with dignity and pride. She handed me her optician's letter, which succinctly stated that she had recently experienced flashes and floaters and that a retinal detachment was suspected in her left eye. I asked her to have a seat and proceeded with the motions of history taking and examination. Three years ago she had undergone a renal transplant for polycystic kidneys. She had thereafter been started on an immunosuppressant in the form of Azathoprine. Whilst protecting her kidneys, it had the undesirable effect of making her body susceptible to infections and she had gone on to acquire cytomegalovirus viremia. To complicate things further the virus was found to be resistant to the usual antiviral treatment gancyclovir. Still, she was fortunate in that valgancyclovir every alternate day seemed to keep the viremia under check. Now two weeks ago she had noticed floaters "like dots in the sky" in her left eye alongside the occasional flash of light "like bolts of lightning."

Her history was enough to make me worried. She was immunosuppressed and very likely had the virus now in her left eye. Fundoscopy confirmed my fears and I was able to identify an extensive area of retinal necrosis with a detachment supero-temporally. The right eye, thankfully, remained well (her vision was good at 6/9 in both eyes). Treatment would either involve therapeutic dose valgancyclovir (900mg twice a day, much higher than what she was currently taking) but this could be nephrotoxic. Of course this might not work as the virus was resistant and whilst it had kept the viremia under check in the past, a higher dose might not necessarily treat the eye. The other option was intravenous foscarnet but this is known to be nephrotoxic and a chat with the nephrologist confirmed that her kidney transplants would suffer if this was used. It quickly became evident that the dilemma was not which treatment would treat the eye but which treatment to use, since offering no treatment would certainly lead to loss of vision first in the left and subsequently in the right eye, but pursuing treatment could lead to loss of her kidney transplants.

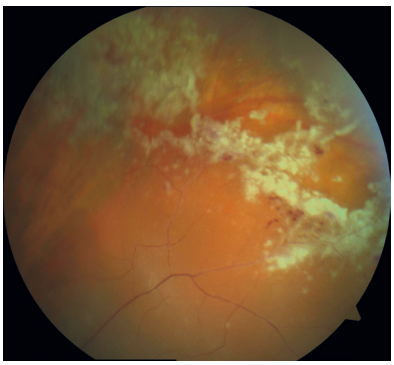

Figure 1: Fundoscopy showing an extensive area of retinal necrosis with a detachment supero-temporally in the left eye.

Save her sight or save her kidneys?

Mrs W by now was under capable retinal team care and received local treatment initially to the left eye in the form of barrier laser (which did not do much) and intravitreal foscarnet the same day. We wanted to give it a few days before deciding on any other treatment and this gave me time to think over the situation. She was now faced with this very difficult decision and before leaving she had asked me what I would do if it was me. I felt as her doctors we should be able to make the decision easy for her but different people place different worth on aspects of their health and how can I know if her eyes or her kidneys are more important to her? Should we make the decision for her or should we give her the facts and let her make it herself?

I decided to revisit a thought-provoking article by Linda and Ezekiel Emanuel which I had read only a few months ago. In it they talk about the different models of physician-patient relationships [1]. There are many models but three main ones are very relevant to our everyday interactions.

The Paternalistic Model: "I know what is best for you"

The doctor uses his or her skills to determine the patient's medical condition and the tests and treatment most likely to restore their health. The doctor then presents the patient with selected information that will encourage the patient to consent to the treatment the doctor considers best. Whilst this may work well in some limited circumstances, e.g. emergencies, its main flaw lies in the fact that it assumes the patient and doctor espouse similar values and views of what constitutes benefit. For Mrs W this would have meant us saying to her that we think she should worry about her eyes more without asking her what is more important to her. Clearly this model is not acceptable any more.

The Informative Model: "Here are the facts and you decide"

Here the doctor is expected to provide the patient with all relevant information, the patient then selects the intervention he or she wants and the physician is thereafter simply tasked with delivery of the chosen intervention. Most of our current practice (and certainly the medicolegal department will happily remind us that rightly so) is based on this model. But it too has its flaws. Patients come to doctors not to see a technician who will rattle off a list of risks and benefits but as someone they can trust with their health and who will help them navigate the difficult process of decision-making, especially when the lines

between right and wrong are blurred. If one of the essential qualities of the ideal physician is the ability to assimilate medical facts, prior experience and intimate knowledge of the patient's views into a recommendation designed for the patient's specific medical and personal condition then the informative model cannot be ideal. Following this model we would have said to Mrs W "These are your options, these are the risks, now you decide." This model is inadequate when our patients ask us (as they often do) what we would do if it was us in their shoes. It is also now accepted that when discussing stressful and complex health issues, most patients only retain a small amount of the information provided in clinic which can lead to the wrong decision.

The Interpretive Model: "Let us help you discover what is important for you and then proceed with the treatment that caters for this"

Here the aim is for the doctor to determine the patient's values and what he or she actually wants, and to help the patient select the available medical interventions that realise these values. In our situation we would explore with Mrs W what is more important for her and then help her proceed with the treatment best suited to this. But sometimes the patient themselves might not be sure of what they want. I would not find it easy to choose between my eyes or kidneys either.

Perhaps in reality the best model is a combination of all of these.

So what did Mrs W decide? She wanted to save her eyes and so we proceeded with a vitrectomy. The eye was left filled with silicone oil. Azathiprone was stopped and valgancyclovir was increased to full dose orally. Things remained stable for a few weeks but thereafter she started developing new patches of retinal necrosis inferiorly. A multidisciplinary team meeting was held with the nephrologists. They were reluctant to start intravenous foscarnet, but knowing the patient's wishes we were able to push our point and eventually she received the medicine. So far her kidneys seem to be holding their own but her blood cytomelgalovirus titre has started to increase again now that the foscarnet has been stopped. Only time will tell if both her eyes and kidneys will survive but for now she is stoically coping with the difficult hand she has been dealt.

Atul Gawande in his book *Being Mortal* writes that as doctors we think our job is to ensure health and survival but really it is more than that [2]. It is to enable wellbeing. And wellbeing is about the reasons one wishes to be alive. Whenever serious sickness or injury strikes and our body or mind breaks down, the important questions remain the same: What is our understanding of the situation and its potential outcomes? What are our fears and hopes? What are the trade-offs we are willing to make and not willing to make? And what is the course of action that best serves this understanding?

I would gladly follow any model that caters for all these questions. And if I find myself on the other side of the consultation, that is what I would want my doctor to do as well.

References:

1. Emanuel EJ, Emanuel LL. Four models of the physician-patient relationship. *JAMA* 1992;**267(16)**:2221-6.
2. A Gawande: *Being Mortal: Illness, Medicine and What Matters in the End*. Profile Books; 2015

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Declaration of Competing Interests
None declared.

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