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Structural Heart Disease During a Pandemic

Anthony N. DeMaria, MD

Judith and Jack White Chair in Cardiology, University of California, San Diego, La Jolla, California, USA

As I sit at home still writing this Editor’s Page, we are in the middle, or perhaps still in the beginning, of the coronavirus pandemic. Infection with COVID 19 has completely disrupted nearly every aspect of daily life, and is the focus of attention of almost all visual and written media. So it seems appropriate that this Page should deal with the pandemic, and its effect upon cardiovascular professionals, especially those involved with structural heart disease. Recognizing that this article will not be published for several weeks, it now seems very likely that the pandemic will still be active at that time. In addition, the effects of the viral infection will surely be felt for many months, and perhaps years to come. So at the risk of being lost in the tsunami of data, reporting, and opinion about the outbreak, I will add my own thoughts.

The coronavirus pandemic has had broad effects that have impacted the population in general. Nearly everyone has been affected by the imposition of social distancing and/or fluctuations in the economy. Schools, restaurants, and non-essential businesses are all closed. Large swaths of the population are sheltered at home. Even sources of relief during times of stress such as sporting events, theater, and movies are shut down. Amazingly, I cannot think of a single individual whose life is not altered in some significant way.

The effect of the pandemic has, however, been greatest upon the medical community. Society has turned to us to treat, cure, and hopefully soon discover a method to prevent illness. Not only have our normal lives been disturbed, but we have been confronted with the challenge of caring for a huge number of very sick patients who have suddenly appeared at our clinics, emergency facilities, and institutions. Moreover, as has been well documented, we are being asked to do this often without the appropriate equipment and supplies. For the first time in our lives, many of us are experiencing the frustration of knowing what to do but not having the requisite support to do it, as is often experienced in developing countries. For those of us in structural heart disease who continue to celebrate the achievement of catheter interventions for aortic stenosis and valve regurgitation, it is sobering to see that our care can be compromised by the lack of ventilators, and even personal protection equipment such as masks and gloves.

While the effects of the pandemic are felt throughout the cardiovascular community, there are some unique aspects to its impact on the field of structural heart disease. Most hospitals have eliminated elective procedures in view of the marked increase in COVID 19 patients encountered or anticipated, especially those requiring intensive care units. The vast majority of structural heart procedures are elective and scheduled, although the degree of urgency varies widely. Therefore, nearly all structural heart disease diagnostic, and especially therapeutic, procedures have been put on hold. This has occurred in my own institution. It will be of interest to see if structural heart disease patients will deteriorate significantly during the pandemic so as to render therapeutic procedures necessary on an emergency basis. Even worse would be a situation in which a patient decompensated sufficiently so as to no longer be a candidate for therapy. Since the facilities, personnel, and equipment employed in structural procedures are usually not used for other purposes, and since many of these patients are only marginally stabilized, it would seem important to consider patients on a case by case basis, and not just put the structural program in temporary mothballs. Similarly, the management of structural heart disease utilizes a heart team approach to a greater extent than most other cardiovascular activities. The heart team members are not only important contributors to care, but represent a very wide spectrum of specialties. In this period of social distancing and working at home, it may be more challenging to gather the heart team members together to review data and interact in decision making. While we are all learning to use online communication and conferencing more extensively, there is always an advantage to review raw data directly and to assess body language as well as spoken word.

The pandemic has also brought to the surface the issue of the risk to the health of medical personnel taking care of patients with transmissible diseases. Infectious disease patients have always conveyed a risk to the health care personnel who rendered their care. This risk has been amplified to an exponential extent by the highly contagious and very virulent COVID 19 virus, and by the widespread lack of personal protection equipment. In fact, health care workers have already contracted the disease, and even died, to a greater extent than any I have previously witnessed in a long career. So it is not surprising that medical workers are experiencing a degree of anxiety in managing coronavirus patients. We all have consented, directly or indirectly, to undertaking personal risk when we entered the medical profession. However, it seems to me that this consent has generally been undertaken casually, and with the expectation that the risk would either never be seriously encountered, or would be minimal based upon the existing condition. Now we
are all unequivocally confronted by a real and serious danger to our own health. To this point in time, I have been impressed by the degree with which medical team members have stepped forward to provide whatever care was required, regardless of the risk to their own well-being. The term "heroism" could appropriately be applied to these individuals. I have often heard comments such as "I knew this was part of the job when I signed up". Nevertheless, for some of us who are in extremely high risk groups, COVID 19 represents a real and imminent danger to our health, and even survival, and presents a unique challenge to balance the duty to patients against the risk of our own illness.

I have made several other observations during this coronavirus outbreak. The first relates to the potential of video conferencing, or perhaps I should say recognizing the value of such communication. Social distancing has resulted in the cancelation of regularly scheduled conferences, which are now held online. These conferences have generally gone very well, and have been very comparable to those in which all participants are present. The video conferences have stimulated many of us to wonder why we don’t do it this way all the time. In addition, I have begun having virtual clinical visits online with a similar result. Neither video conferences nor virtual clinic visits fully replicate the in person experience or the opportunity to gather data and communicate with the patient. However, they represent a very valuable alternative to our current practices that will likely be increasingly utilized long after the pandemic has subsided. Finally, I have been pleasantly surprised by being contacted by friends and colleagues with whom I have not had contact in some time. In each case they have been interested to know how I am doing during this difficult time, and express their support. These experiences have stimulated me to contact other friends and colleagues to spontaneously inquire as to how they are doing. Their response has been similar to mine. While there are precious few silver linings in this pandemic storm, it does seem to have engendered a sense of community and caring, and the reassuring feeling that we are all in this together and are there for each other.

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