EDITOR’S PAGE

The Department of Cardiac/Vascular Medicine and Surgery

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Several years ago some of my colleagues and I initiated what we thought was a novel project: bringing together everyone interested in cardiac and vascular disease into one dedicated center. In the course of planning this project we began to survey what others were doing. I was amazed to find that we were not unique in pursuing this course, but rather that we were part of a trend. We encountered a number of institutions which had, were in the process of, or were planning to build structures to house multidisciplinary programs devoted to cardiovascular diseases. It appears we are undergoing a paradigm shift in the way cardiovascular programs are organized.

The thinking that prompted us to establish a cardiovascular center was similar to that which stimulated others. We reasoned that individuals from different specialties who deal with the same disease processes in the same organ system would share more in common with each other than with other members of their own discipline. We anticipated that considerable interaction and cross fertilization would occur resulting in a whole that was greater than the sum of its parts. We felt that symmetries would occur in the practice of medicine producing a more convenient, satisfying, and higher quality clinical care for patients. In aggregate, we and others believe that centralized integrated multidisciplinary cardiovascular programs will result in superior levels of medical care, education, and clinical research.

The components of the various cardiovascular centers tend to be similar. The foundation of all such programs, of course, is adult cardiology and cardiovascular surgery. These two units comprise the largest professional staff and represent the greatest clinical and financial activity. In accord with the increasing interest in the vascular component of cardiovascular medicine, all vascular disease programs are included. This usually consists of vascular surgery, stroke and pulmonary vascular disease units, and in some cases, organized peripheral vascular medicine sections. Given the increasing overlap between cardiology and radiology in imaging and intervention, these aspects of radiology are usually incorporated into the center. Because 50% or so of discharges for cardiovascular disease enter the hospital through the emergency department, these services are often integrated with the center. Depending on local circumstances, in preventive medicine, pediatric cardiology, metabolic diseases, and other programs are often included. The objective is to include everyone who has a major interest in disorders involving the heart and circulation.

The foregoing groups have had major interaction in the past. What is new is the effort to unite these programs geographically, administratively, and even financially. The epitome of geographic centralization is the “heart hospital,” a freestanding facility totally dedicated to cardiovascular disorders. Many institutions are constructing separate buildings dedicated to circulatory diseases. In some cases, the cardiovascular center consists of a “hospital within a hospital” or a dedicated space within a major general medical and surgical facility. Although some programs attempt to exist as a “center without walls,” the absence of a common location inhibits achieving many of the sought-after goals.

Regardless of the housing arrangement, what makes these programs unique is a centralized administration. Although implementing a central governance presents one of the greatest challenges to the program, such organization seems to offer the best opportunity to realize the full potential of a comprehensive multidisciplinary effort. It also provides a mechanism for dealing with the progressive blurring between cardiology, diagnostic and interventional radiology, and even cardiac surgery (1). Financial integration has been implemented to a more variable extent. A true group practice model would entail all of the financial issues inherent in such an arrangement in any setting.

The advantages of a cardiovascular center for clinical care are obvious. Such a facility represents a “one-stop shop” where virtually any aspect of circulatory illness from prevention to management can be provided. In addition, such centers convey a degree of specialization and expertise that patients seem to be seeking. Just as people select a specific type of lawyer or retailer depending on their individual need, so too do patients often find it attractive to receive medical care from programs that focus on certain diseases. Obtaining medical care from a facility that limits itself to circulatory disorders may be more appealing than obtaining it from one that also deals with other general medical and surgical conditions.

The educational benefits of cardiovascular centers are also fairly obvious. It is clear that the individual participating specialties increasingly need the knowledge and skills possessed by the others. These centers provide the optimal incubator for the fully integrated cardiac imaging and
vascular interventional training programs that I believe will emerge in the near future. In my view, the potential benefits for research are a bit more mixed. There is little doubt that translational and clinical research will be favorably affected by the possibility of collaboration and cross fertilization. However, basic research in cardiovascular disease is becoming increasingly generic and is similar to basic science work in other organ systems. Thus, the increasing emphasis on inflammation, immunology, coagulation, and so on in cardiovascular disease argues for as close an integration of basic scientists with each other as with clinical investigators in their organ system of interest. It is likely that the optimal integration of basic science research into cardiovascular centers will await further experience.

The major challenge to cardiovascular centers, as I see it, is administration. The individual entities involved are used to being independent. Within the halls of academia, the departmental structure (e.g., medicine, surgery) has been well established. Space, salary, and professional advancement are under the control of department chairs, who will be reluctant to relinquish such authority. They will rightly see that cardiovascular services are a major generator of revenues for their departments and resist any attempt to implement an administration that would alter the flow of these dollars. Within the private practice community, individuals typically practice alone or in specialty groups. Physicians have traditionally had a fierce sense of independence and will view incorporation into a larger body with some possible loss of autonomy with great caution. The disparities in personal income that currently exist among physicians will only amplify the difficulties in establishing a central administration for the centers.

In addition to the previously listed difficulties for administration, one must consider the tensions that have often existed between specialties. Turf disputes are well woven into the fabric of medicine. Internists and surgeons long have playfully (I think) teased each other about the nature of their disciplines, and radiologists, who lack direct patient care, have been protective of imaging services. Watching these individuals interact is often akin to watching porcupines mate. Moreover, integration into a cardiovascular center presents many of the same issues encountered when large companies merge. Each company has its own administrative organization which must be consolidated into a single structure for the merged entity. Although authorities often address this issue by forming committees, few if any entities are effectively managed by committees. For cardiovascular centers to achieve the full potential possible for an integrated multidisciplinary program, it is likely that a clear administrative organization will have to be established. In my view, this represents the tallest hurdle for cardiovascular centers to overcome to be viable entities.

There are, of course, a number of downsides to cardiovascular centers. As mentioned previously, revenue-generating services often subsidize those that are not. Loss of such subsidies could substantially compromise the ability of institutions to provide services and support for important non-cardiovascular programs. In addition, sequestration of cardiovascular activities from other medical services may deprive those physicians of insights derived from progress in other fields. Finally, any barrier to rapid and easy access to consultation by other specialists imposed by a cardiovascular center would also be detrimental.

The organization of medicine has continuously evolved over the years. Following the initial separation of internists from surgeons, each group has progressively developed subspecialties. Although these subspecialties have often dealt with the same organ system, and often the same technology, we have held steadfast to the original departmental and section organization and administration. Fueled by the potential of clinical care, educational, research, and marketing benefits, we now appear to be moving toward focused, integrated, multidisciplinary cardiovascular centers. It is likely that in the future we will have cardiovascular imagers, cardiovascular catheter interventionalists, and perhaps cardiovascular proceduralists (e.g., percutaneous valves and robotically placed epicardial pacing leads) who will be in the centrally located and administered department of cardiac/vascular medicine and surgery. These centers will likely presage a paradigm shift within medicine whereby neurological, oncological, reproductive, and other centers emerge as the organization units within institutions. Although there will be obstacles to overcome and problems to avoid along the way, the logic behind such centers is so compelling that even the difficult issues involving administration and financing are almost certain to be overcome.

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