

Editorial

Cardiology and cardiac surgery: twins separated at birth?

Cardiología y cirugía cardíaca: ¿gemelos separados al nacer?

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In March 2023, a group of cardiologists and cardiac surgeons attended a meeting convened by the presidents of the Spanish Society of Cardiology (SEC) and the Spanish Society of Cardiovascular and Endovascular Surgery (SECCE). In an atmosphere of openness and without preconceptions, we had the fascinating opportunity to share 2 days dedicated to drawing up proposals for the combined growth of both disciplines, giving rise to the SEC-SECCE joint commission. Without strict rules or specific objectives, we calmly and enthusiastically embraced this task with a spirit of cooperation and a genuine desire to explore new synergies between our areas of expertise.

In no time at all, we realized that the noise surrounding us tends to drown out what we have in common and sometimes even pushes us to opposing positions. We have so much in common that we set about imagining what we could accomplish together: in an ideal world, we would create a joint specialty with a common core of cardiovascular pathology, followed by a subsequent subspecialization in each of the areas into which we have somewhat artificially divided cardiovascular disease. This was beyond the scope of our endeavor and, frankly, not even possible.

The 2 specialties share an interest in understanding the root causes of disease, a desire for improved diagnoses, a dedication to our patients, and the joy and enthusiasm of success and the frustration and exasperation of failure. It is true that this noise appeared when we suggested certain ideas or attempted to organize specific procedures that, in all truth, did not fall within our remit. We tried to imagine how we could grow together and, by moving away from contentious issues, we discovered various activities and actions that could flow from the group and encourage closeness and collaboration. These initiatives run from the short- to long-term and from simple and feasible to complicated and utopian, but they arose naturally in just 2 days. After attempting to address a wide range of options, we established a clear objective as a starting point for the SEC-SECCE joint commission: create initiatives for greater interdisciplinary value and improved collaboration between the 2 specialties.

It has been obvious for decades now that multidisciplinary medical care significantly improves care quality and survival in the cardiovascular field. In particular, the collaboration between cardiology and cardiac surgery subspecialties represents a

cornerstone in the development of cardiovascular medicine. In the beginning, in the early days of modern medicine in about the 1950s, cardiac surgeons and cardiologists collaborated in the diagnosis and management of different facets of cardiovascular disease. In less than a century and with an occasionally dizzying pace, we are fortunate to have been able to witness this exponential growth in diagnostic tests and in the medical, surgical, electric, and percutaneous treatment of cardiovascular disease. Here, we will provide some examples of the benefits of the complementarity of the 2 specialties.

In the cardiomyopathy field, collaboration between a clinical cardiologist and a surgeon allowed identification of obstructive hypertrophic cardiomyopathy.¹ Eugene Braunwald auscultated a striking dynamic systolic murmur in a young patient with exertional angina. The pressure gradient measured by his colleague, the surgeon Glenn Morrow, revealed a major obstruction and indicated surgical resection of the subaortic membrane that ended in nontherapeutic sternotomy. Subsequently, the same findings in a patient series led to the discovery of obstructive hypertrophic cardiomyopathy and development of surgical myectomy, a treatment still used today.

The initiative and drive of surgeons facilitated the first heart transplant. The feasibility of the technique was evident from the beginning, but its subsequent development was compromised by poor recipient survival. Immunosuppressive therapy and medical therapy aimed at preventing rejection were key to the expanded use of heart transplant, which is still the treatment of choice in patients with end-stage heart failure.² Some of the first recipients would probably not now require transplantation due to improved medical care and the better survival of heart failure but further discussion is beyond the scope of this article.

Arrhythmias are no exception. A disease causing sudden cardiac death, particularly in young people, was identified by John Gallagher, a cardiologist and one of the first electrophysiologists, at least based on current understanding, who described the pre-excitation syndromes. In conjunction with the surgeon Will Sealy, they were pioneers in reporting the mapping of the accessory pathways and their surgical ablation.³ Later, with the technological development and manufacture of ablation catheters, this technique evolved into a percutaneous treatment.

Another product of combined effort is the development of the technology allowing surgeons to perform minimally invasive interventions (via less harmful incisions in patients), likely with

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the considerable help of advances in cardiovascular imaging. At the same time, a huge number of the latest innovations in percutaneous valvular procedures are evolutions of surgical techniques whose development relied on synergies between specialists from both disciplines.

As medicine evolves, we have moved from a syndromic definition of disease to a better pathophysiological and anatomical understanding, aided by surgical exploration. We now find ourselves in an era of evidence-based decision-making in which, via increasingly comprehensive and complex biostatistics, we attempt to identify the best path for our patients. Currently, with the molecular development of medicine, we are increasingly gaining a deeper understanding of disease, its diagnostic pathways, and, of course, its cure. And the relevant question is not who should undergo this procedure or another. Nor does it matter if a particular clinician should “own” a particular patient during their stay. The question is how to continue in this new era of individualized medicine, treating our patients while contributing to the development of translational research that allows us to continue growing with the power of current technology.

Interdisciplinary approaches to diseases are increasingly being advocated, and there is thus more discussion of care processes and how to adapt them in each specific center. Within the entire process, the focus is the patient and all participants have an objective, from psychologists to nurses, physiotherapists, administrators, physicians, and surgeons. This multidisciplinary approach permits a comprehensive evaluation of each patient, which leads to a selection of personalized treatments adapted to specific individual needs. In this way, we optimize the time to diagnosis, improve the physical and mental condition of patients when they eventually undergo surgery, and better support patients and their family throughout the process.

Critically, this collaboration not only boosts clinical outcomes, but also drives innovation and advances in the field of cardiovascular disease. The constant exchange of information, the discussion of clinical assumptions, and the joint participation in research projects promote growth and continuous improvement.

All of us in the joint commission have committed with the presidencies of the SEC and the SECCE to encourage and promote this collaboration between cardiology and cardiac surgery. Our initial goal of interdisciplinarity and collaboration includes specific operational objectives that facilitate the greater representation of surgeons in the SEC and cardiologists in the SECCE, the implementation of joint training activities, and the creation of new initiatives naturally highlighting the values uniting us as surgeons and cardiologists. We have established 3 initial activities

shared with both directives of the scientific societies: the performance of a study to understand the current relationship between the 2 specialties, the creation of a workshop with the participation of surgeons and cardiologists at the 2024 SEC Congress, and the writing of this editorial to share with all of you our belief that it is perhaps time for the long-separated twins to meet again, for everyone's benefit.

You are all invited and more than welcome to join the SEC-SECCE joint commission movement.

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