LETTERS FROM READERS

Challenges of Anticoagulation in Chagasic Cardiomyopathy and Atrial Fibrillation

Desafíos de la anticoagulación en miocardiopatía chagásica y fibrilación auricular

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Chagasic cardiomyopathy (CC) is the progressive form of chronic T. cruzi infection, affecting up to 30-40% of patients in the chronic phase of the disease.

Its manifestations include the development of heart failure, cardiac conduction system disorders and tachyarrhythmias. These phenomena are more frequently observed than in other dilated cardiomyopathies, which confers to CC greater mortality.

Likewise, CC involves a series of specific structural and functional alterations that are associated with a greater thromboembolic potential, such as slow blood flow in the context of heart failure, ventricular aneurysms, intracavitary thrombi, severe atrial dilatation and atrial fibrillation (AF). (1)

The study published by Echeverría et al. evaluates the risk of embolic events in patients with CC and AF who are under anticoagulant therapy. (2)

Although anticoagulants are a standard treatment to prevent ischemic events in patients with AF, this study raises the question of whether conventional anticoagulation, either by direct oral anticoagulants or vitamin K antagonists is sufficient to protect patients with CC. So, the authors analyzed the incidence of systemic embolisms in anticoagulated patients diagnosed with AF, comparing those with CC with those with other forms of cardiomyopathy.

It was striking that, despite being on optimal anticoagulation therapy, patients with CC had a significantly higher cumulative incidence of embolic events compared with those with other cardiomyopathies. This occurred despite the fact that the CC group had a significantly lower CHA_2DS_2-VASc score. (2)

An interesting aspect of this finding is the fact that the embolic risk in CC appears to be distinctive and cannot be fully explained by traditional risk factors, nor by the classic scores suggested by clinical practice guidelines.

Some previous publications have attempted to design specific embolic risk scoring systems in Chagas disease in order to guide the decision of anticoagulation in this population, including variables such as the degree of systolic dysfunction, presence of apical aneurysm, abnormal ventricular repolarization, and age. Unfortunately, due to the lack of external validation, its applicability is restricted. (3)

Another important element highlighted in the study is that the increased risk of embolism in patients with CC persists despite anticoagulation. This suggests the possibility that standard anticoagulation is not sufficient to prevent embolic events in this particular population and that an alternative approach contemplating other associated factors is required.

Although the study has limitations such as the relatively small sample size and the retrospective nature of the analysis, the findings provide valuable information suggesting that patients with CC should be evaluated in a more complex manner and may benefit from personalized anticoagulation treatment approaches, even in the absence of AF.

This underscores the need for further research to develop specific treatment guidelines in these patients, thus optimizing their clinical management.

Ethical considerations

Not applicable.

Conflicts of interest

None declared.

(See authors' conflict of interests forms on the web).

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AUTHORS' REPLY

We thank Dr. Zuviría for his comments on our article "Risk of embolic events in patients with chagasic cardiomyopathy and atrial fibrillation despite antithrombotic therapy: is anticoagulation sufficient?". Their analysis reinforces the relevance of these findings and underscores the need for further research in this crucial field.

We fully agree with Dr. Zuviría that Chagasic cardiomyopathy (CC) presents a unique challenge in antithrombotic management. The structural and functional alterations characteristic of CC, including ventricular aneurysms, intracavitary thrombi, and severe atrial dilatation, contribute to a distinctive thromboembolic risk profile that transcends conventional risk factors assessed by scales such as the CHA_2DS_2-VASc. (1) Additionally, other pathophysiological mechanisms such as autonomic dysregulation and the presence of intrinsic coagulation disorders also play a role in the elevated risk of embolic events in this population. (2,3)

Dr. Zuviría rightly points out the limitations of specific embolic risk scoring systems for CC, such as the one proposed by Sousa et al. (1) Although these initiatives are valuable, we agree that their clinical applicability is hampered by the lack of external validation. This underscores the urgent need to develop and validate more robust risk stratification tools specific to this population.

A critical aspect emerging from our study is the persistence of elevated embolic risk in patients with CC despite standard anticoagulation. This finding raises fundamental questions about the efficacy of conventional anticoagulation regimens in this population and suggests the need to explore alternative or complementary prevention strategies.

We thank again these valuable comments, and hope that our study will serve as a basis for future research in this field.

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Durability of Biological Prostheses in Aortic Position

Durabilidad de las prótesis biológicas en posición aórtica

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A few years ago, the choice between using a biological or mechanical aortic prosthetic valve seemed a little easier. Currently, the reduced need for anticoagulation associated with the appearance of new valves with better hemodynamic profiles and materials has shifted the balance towards the use of bioprostheses. The problem is that there is still doubt about their durability over time.

Daniel Navia et al, with their article published in the Revista Argentina de Cardiología "Durability of biological aortic valve prostheses: structural deterioration and incidence of events in distant follow-up", help us to understand a little more about the subject. Although it may have the limitations of a 20-year observational study, it allows us to draw important conclusions. As can be seen in the study, late survival in patients with prosthetic biological valves is high, with some differences depending on the age group evaluated. Furthermore, it is evident that structural valve deterioration in this type of valves is infrequent. (1)

These findings are consistent with other studies.

Caus et al analyzed the trends in surgical aortic valve replacement with biological versus mechanical valves in middle-aged patients, and observed that

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there is a greater predilection for the use of biological valves instead of mechanical valves in these patients. In addition, no significant differences were found in early mortality between the two types of valves. (2)

Although some of the clinical guidelines on the management of valvular heart disease consider the indication of biological prosthesis reasonable in patients between 50 and 65 years of age, (3) it is important to individualize the indication, to know the patient's clinical history, comorbidities, life expectancy and factors that may lead to early structural valve deterioration, thus avoiding risks and minimizing reinterventions.

In another article, Daniel Pérez-Carmargo and collaborators analyzed the survival of patients aged 50 to 69 years who received an aortic valve replacement, using biological or mechanical prostheses. The authors found that there is no significant difference in long-term survival between the two types of prostheses. (4)

Further research is needed to better understand the factors that influence the durability of these prostheses, including prosthesis design, sizing and tissue preservation techniques, with the goal of improving their long-term performance. As specialists, it is important to continually review new studies and advances, allowing us to make the best decisions with and for our patients.

Ethical considerations

Not applicable.

Conflicts of interest

None declared.

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