

Infective Endocarditis: Are we Managing our Patients Well?

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Infectious endocarditis continues to be a disease with a somber prognosis. In recent years, despite evident advances in surgical and diagnostic techniques, it has not been possible to substantially reduce mortality.¹ This is probably due to changes in the clinical spectrum of the disease: at present, it is rare to diagnose endocarditis due to *S. pneumoniae* in a young patient with rheumatic cardiac valve disease, which has a relatively benign prognosis. Nowadays the diagnosis is usually made in patients of advanced age, with multiple pathologies and difficult microorganisms. This makes medical and surgical treatment especially complex and is responsible for significant morbidity and mortality rates.

A second factor in the lack of improvement in survival figures could be that treatment is not carried out adequately. If this were to be the case, there would be some room for hope to achieve better clinical outcomes by optimizing the treatment of patients. Clinical guidelines for the prevention and treatment of infectious endocarditis exist in various countries, as well as Spain.^{2,3} Nevertheless, little information is available on compliance with guidelines. The literature contains only one study, which has demonstrated that the degree of compliance with guidelines in France is poor and a cause for concern.⁴ This is why the paper by Mercedes González de Molina et al⁵ is so extraordinarily interesting.

The study by these authors indicates that in Spain there are also discrepancies between the recommendations of the clinical guidelines and actual daily practice, and suggests that deviation from the norms can lead to an unfavorable outcome. The pre-hospital phase of the disease is of special concern in view of the indiscriminate use of antibiotics without performing cultures, which occurred in 19 of the 34 patients

analyzed. This indicates, on the one hand, that the slipshod medical practice of administering antibiotics for fever of any origin is highly generalized. On the other hand is the absence of diagnostic suspicion, which may be understandable and not very likely to improve due to the rarity of endocarditis and its varied forms of presentation.

Once the patient has been admitted to the hospital, the diagnostic stage proceeds more correctly in my view. From the findings reported it can be deduced that it may be necessary to insist more on performing transesophageal echocardiography whenever reasonable diagnostic doubts arise and in all patients at risk of endocarditis. Treatment, whether medical or surgical, does not seem to be seriously off course. Most entry foci were treated and errors in the administration of antibiotics were due mainly to excess treatment and, probably, insufficient monitoring of toxicity. The surgical indications were also correct, since the only case in which surgery was judged to be incorrect is probably debatable (a patient with a severe brain injury).⁶ The authors note correctly that the difficulty in endocarditis is to choose the most appropriate moment for surgery, which is not always easy to do, rather than to establish the surgical indication. In any case, although there are no guidelines on this matter, there have long been clear indications in the references that suggest that once the decision to operate is made, surgery should not be delayed.^{7,8} Once again, these findings show that guidelines for clinical practice are a very useful instrument in the case of such a complex disease, but they do not exempt physicians from exercising careful individual judgment.

In my opinion, this study clearly shows that medical efforts in the hospital, although they could be improved, are generally acceptable in accordance with our knowledge of the disease. This does not mean that we should not insist on perfecting therapeutic actions as far as possible. In this sense, I fully share the opinion of the authors that specialized teams are needed at each tertiary hospital that is dedicated to the treatment of these patients, as we have at the Hospital Vall

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d'Hebron. This undoubtedly improves the degree of compliance with guidelines for therapeutic actions and, in addition, facilitates consensus-making on decisions that are sometimes very difficult to make. Specifically, surgical indications and interventions are undoubtedly carried out with less delay.

I also share the authors' skepticism regarding the possibilities for disease prevention and early diagnosis, particularly in patients without predisposing heart disease. I do not think that it makes any sense to allot resources and effort to improving standards for antibiotic prophylaxis, since the protective role of prophylaxis is questionable.⁹ On the other hand, even if it were concluded that prophylaxis has some effectiveness, it would only help patients with predisposing heart diseases and streptococcal infections. We have already noted that such patients are only a small percentage of the cases of endocarditis that occur at present. However, I do believe, like the authors, that patients with heart disease must be instructed about the guidelines for action in the case of fever (antibiotics should not be taken in the absence of a focal infection and blood cultures).

It also is probable that meticulous care during medical instrumentation and the management of venous accesses in patients at risk (patients with diabetes, on dialysis, or with heart disease)¹⁰ could reduce the growing number of cases of serious nosocomial endocarditis. There is no doubt that a constant effort must be made to remind physicians that broad-spectrum antibiotics should not be used indiscriminately for the treatment of febrile conditions without a clear infectious focus and that blood cultures should be made before giving antibiotics if the febrile condition persists.

The present study clearly illustrates that the cases of endocarditis currently diagnosed in hospitals are extremely serious: 15 of the 34 patients had other major diseases, only 13 patients were infected by *S. viridans*, the remaining etiological agents being very aggressive (staphylococci, *S. agalactiae*, *S. faecalis*). Only 11 patients knew that they had a cardiac valve lesion. These findings contribute much to explaining the 29% mortality observed, which is similar to that found in recent series and comparable to our own experience in the last five years. On the other hand, the severity of the cases of endocarditis now being diagnosed is a cha-

llenge that it obliges us to strive for excellence in the treatment of patients.

To my understanding, studies like the one published here illustrate one of the primary targets of clinical investigation, to reflect on medical actions *per se* with the aim of exposing errors and improving the outcome of therapy, if possible. In my judgment, the main interest of this work lies in the qualitative valor of the type of information reported and the critical spirit it reveals, independently of the instrument chosen for the quantitative interpretation of the findings.

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