LETTERS TO THE EDITOR

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Comment on clinical features and changes in epidemiology of infective endocarditis on pacemaker devices over a 27-year period

We read with great interest the article by Carrasco et al. regarding the changes in epidemiology and clinical features of cardiac rhythm device-related infective endocarditis (CDRIE) in a long time period. As stated by the authors, this study provides one of the largest case series of CDRIE and its complications so far. However, several issues draw our attention. First, the authors reported that 92% of the patients with CDRIE did not have generator pocket infection. Local pocket infection is frequently associated with cardiac rhythm device-related infections, and in most of the cases, it is difficult to discriminate between local pocket and systemic infection associated with these devices. In our series with cardiac rhythm device-related infections, only 15% of the cases were presented with CDRIE without generator pocket infection. Another issue is about the management of CDRIE. Even in sole pocket infections, complete hardware removal is recommended by current guidelines. In patients with definite diagnosis of CDRIE, medical therapy alone is associated with higher morbidity and mortality. In this article, 6 patients (24%) had not undergone hardware removal, mostly due to rapid response to antimicrobial therapy within 48 h. However, according to the modified Duke criteria, diagnosis of infective endocarditis (IE) can be rejected with the resolution of IE symptoms within ≤4 days. Therefore, some of these patients treated with only antibiotics might have an alternative diagnosis other than CDRIE. In addition, incidental masses located on cardiac rhythm device leads are frequently encountered during transoesophageal echocardiographic examinations. At last in this paper, most of the patients underwent surgical hardware removal instead of a transvenous modality (76%). Transvenous lead extraction techniques has facilitated the management of patients of CDRIE, even in the presence of large vegetations and strongly recommended by current guidelines instead of surgery. Despite the increasing use of cardiac rhythm devices in this report, only one patient underwent transvenous lead extraction.

References

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Comments on clinical features and changes in epidemiology of infective endocarditis on pacemaker devices over a 27-year period (1987–2013): reply

We have read with interest the comments of Guray et al. about our work. As they point out, our article provides one of the largest series of infective endocarditis on pacemaker devices within the last decades, and some of its limitations could be due to the long study period (1987–2013) and the possible changes in management, diagnosis, and therapy of endocarditis patients occurred during this period of time. Guray et al. say that 92% of our patients did not have generator pocket infection and that pocket infection is commonly associated with cardiac electronic devices endocarditis. In their series, they found that only 15% of patients with endocarditis on these devices presented without generator pocket infection. We agree in that most articles describe a higher rate or pocket infection than it was in our series, but this rate depends on the diagnostic criteria used for diagnosing such problem. We established only the diagnosis of generator pocket infection when the microorganism isolated in blood cultures and/or the vegetation culture was also isolated from the pocket’s exudate culture. These criteria were found only in 8% of our endocarditis patients, although, in some more cases, signs of local inflammation and/or infection were also present. Probably, higher rates of generator pocket infection were found if only clinical criteria were taken in account.

Regarding the second comment of Guray et al., on the management of infective endocarditis on pacemaker devices, it is true that current guidelines recommends complete device removal, but this recommendation is based on experts’ consensus and on the fact that some studies show that medical therapy alone is associated with higher mortality rate. In our series, 24% of patients did not undergo device removal, in some of them because of the high surgical risk, but mostly due to rapid response to antimicrobial therapy. Guray et al. say that some of these patients could not have infective endocarditis, since resolution of symptoms within 4 days after antibiotic therapy in the absence of definite vegetation could be considered as ‘rejected’ endocarditis, according to modified Duke criteria. Also, sometimes it is difficult to establish whether masses located on pacemaker wires are true vegetation or incidental masses. But in all of our cases not undergoing device removal, echocardiographic images had clear