The changing face of infective endocarditis

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Infective endocarditis is a disease that continues to evolve in response to changing host conditions and other factors.
data on nosocomial, nosohussial IE that, despite important regional variations,11–12 is described as increasing and posing new challenges in Western countries. In fact the authors suggest a possible marginal role for nosocomial endocarditis, because the increase of *S. aureus* cases is only due to drug addiction and haemodialysis. It is possible that the lack of epidemiological changes may be explained by the relative lack of several nosocomial cases. These data may be an expression of a regional variation, as in Minnesota, which is probably connected to socioeconomic and health peculiarities of those populations. Undoubtedly those are populations with a good socioeconomic standard, and low frequency of drug addiction. In Finland, HIV infection is rare outside Helsinki, and several health preventive initiatives have been proposed. If these results are confirmed in prospective series, it will be necessary to study carefully why these areas are preserved from dangerous nosocomial and nosohussial IE. It is possible that these findings may be an expression of less invasive treatments and more preventive aids. On the other hand it is well known that in some areas, invasive vascular procedures are sometimes widespread well beyond established indications. Guidelines should consider these new epidemiologic aspects.

Moreover, generalisations cannot be made about the data from Heiro *et al.*,14 as demonstrated by several published studies where important clinical and epidemiological changes in IE were reported over the last decades,1–4,11–12 despite being from different backgrounds and centres. This constant evolution represents one of the most intriguing challenges in this field.

**CONGENITAL HEART DISEASE**

The second paper by Di Filippo *et al.)*15 points out the epidemiological and clinical changes of IE in patients with congenital heart disease. These patients are a small but definite subgroup of patients within available surveys of IE, that deserve an in-depth analysis because of their unusual ages (children or young adults) and wide diversity. This article is a retrospective study on 153 episodes of IE from 1966 to 2001 that shows an increase in the mean age at onset, and a trend toward a higher frequency of endocarditis in patients with small, not operated on double-inlet ventricles (DIV), complex cyanotic diseases with palliative therapies, and patients with small, not operated on double-inlet ventricles (DIV), complex cyanotic diseases with palliative therapies, and Rastelli operation. The main route remains the oral one, but with an increase of cases related to cutaneous routes. The main isolated microorganisms are streptococci, and survival does not change over time in a significant way. Prophylaxis was seldom performed, and sometimes had been ineffective. This study confirms that the host is mainly responsible for these changes. Surgical therapy is a contributing factor, increasing the survival rate, the aging of patients, and the risk of endocarditis after operations with prosthetic material or residual high velocity shunts. On the other hand, surgery may reduce the risk of endocarditis in a wide range of operated patients. Detailed data are not available on nosocomial endocarditis, but it seems uncommon in those young patients where streptococci and the oral route are prevalent, and common in patients with known heart disease.

Both studies show that IE is a disease in constant evolution, with unusual features according to regional variations or subgroups. Certainly these results cannot be generalised, but may show the existence of subgroups with a low rate of drug addiction, high prevalence of the oral route, and streptococci. Study of regional differences and population subgroups, including referral and non-referral centres, may offer an explanation for some of these changes and propose possible solutions for the future.

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