

Infective endocarditis in octogenarians: a retrospective study in a single surgical center

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Introduction: Infective endocarditis (IE) is a severe disease associated with high morbidity and mortality. The EURO-ENDO registry reported a mean age of 59.25 ± 18.03 years; 46.3% of patients were over 65 and 12.0% over 80 years. Little is known about the best management of elderly patients with IE. In these patients, surgery may be challenging.

Purpose: We aimed to determine the clinical and echographic characteristics, the therapeutic strategy, and the outcome of IE in octogenarians.

Method: We retrospectively included in the analysis 457 consecutive patients with definite active IE in a single surgical centre. Descriptive statistics are reported as mean \pm standard deviation (SD) or median \pm interquartile range (IQR) for continuous variables with normal and non-normal distribution and as frequencies and percentages for categorical variables. Between-groups comparisons were assessed by Student's t-test, Mann-Whitney U test, Kruskal-Wallis, or chi-square test, as appropriate. Univariate long-term survival was analysed by the Kaplan-Meier method.

Results: In our cohort, octogenarians were 17% of the whole population (N = 77). In patients under the age of eighty, males were mostly involved with a sex ratio exceeding 2:1. This ratio was inverted in older people, where the female gender represented 57% of the total (0.001). *Staphylococcus aureus* (10.4 vs 20.5%, $p = 0.038$) and Enterococci (29.9 vs 16.3%, $p = 0.008$) were significantly less and more frequent than in younger people, respectively. Comorbidities were more frequent in elderly patients, such as hypertension (80.5 vs 53.2%, $p = 0.001$), dyslipidaemia (42.7 vs 27.3%, $p = 0.008$), and history of cancer (29.9 vs 19.2%, $p = 0.036$). Consequently, EUROSCORE II was higher (median \pm IQR 19.18 ± 19.0 vs 11.9 ± 5.7 , $p = 0.001$). In octogenarians, IE was more frequently left-sided (98.7 vs 89.2, $p = 0.009$) and complicated less often with peripheral embolism (31.2 vs 43.9%, $p = 0.038$). We found no differences between the two groups for the type of infected valve (native or prosthetic), the severity of valve dysfunction, paravalvular extension, and vegetation length. Octogenarians were more often excluded from surgery despite indication (19.5 vs 7.7%, $p = 0.016$) and had higher thirty-day (11.7 vs 7.9%, $p = 0.001$) and three-year (45 vs 30%, $p = 0.001$) mortality than younger patients.

Conclusions: Octogenarians represent a considerable proportion of overall cases of IE, with specific clinical and microbiological characteristics. Older patients are more often excluded from surgery, and the overall prognosis is poor.

Abstract Figure.

