

学位論文の要旨

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学位論文名 Factors Influencing the Prognosis of Octogenarians with Aortic Stenosis in the Advanced Aging Societies

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論文内容の要旨

INTRODUCTION

Aortic valve stenosis (AS) is now the most common form of native heart disease. The growth rate of the elderly population has continued to increase and the prevalence of AS sharply increases with age. The therapeutic management of AS patients depends on the hemodynamic severity of the stenosis and the presence of symptoms (angina, syncope, dyspnea), as the onset of symptoms and left ventricular (LV) systolic dysfunction are associated with a poor prognosis. However, it is difficult to use these variables to assess the risks of AS patients who are 80 years of age or older. The decision to operate raises specific problems in the elderly, because of higher incidence of operative mortality and morbidity, particularly in those who are deemed to be at high surgical risk. Although AS is common, little data is available regarding the factors that influence the natural history of AS patients of 80 years of age or older in advanced aging societies. To address this issue, this study investigated the natural history and the indications for valve procedures in AS patients who were 80 years of age or older.

MATERIALS AND METHODS

All of the patients who were 80 years of age or older, who were examined at our outpatient clinic for valvular heart disease between 2006 and 2012 and who were found to have a stenotic native aortic valve (AV) area of $\leq 1.5 \text{ cm}^2$ were included in the present study. This study protocol was approved by the ethical committee of Shimane University Faculty of Medicine. Patients with significant associated valve disease (aortic or mitral regurgitation of a grade higher 2/4 or mitral stenosis with a valve area of $\leq 1.5 \text{ cm}^2$ and prior valve replacement surgery) were excluded from the study. According to these criteria, 108 patients (mean age, 84.2 ± 3.9 years; female, 65 patients; average AV area, $0.85 \pm 0.27 \text{ cm}^2$; average AV peak velocity, $4.1 \pm 0.9 \text{ m/s}$) were identified.

The clinical data included age, gender, body surface area, body mass index, smoking history, documented diagnosis of atrial fibrillation, diabetes mellitus, hypertension, dyslipidemia, hemodialysis, coronary artery disease (history of myocardial infarction, coronary artery stenosis on coronary angiography), and pertinent current and past medical and surgical history. Special attention was paid to the documented symptoms that were potentially associated with AS, including angina, chest pain, syncope and dyspnea or other evidence of heart failure. Our echocardiographic database was searched for patients with moderate and severe AS (defined as a valve area $\leq 1.5 \text{ cm}^2$). All of the patients underwent standard echocardiographic examinations which that included comprehensive 2-dimensional and Doppler echocardiography.

All study patients were followed up after their initial examination for moderate and severe AS. The follow-up information was obtained by a detailed review of all medical records. For the assessment of the outcome, the end points were death (all cause death) or AVR during the follow-up period.

RESULTS AND DISCUSSION

Eighty patients were symptomatic at the time of their enrollment: chest pain (n = 26), dyspnea (n = 47), and syncope (n = 7). The asymptomatic and symptomatic groups were defined

according to baseline clinical characteristics. The median duration of follow-up was 9 months (interquartile range, 2 to 25 months).

There was no significant difference in the AV area of the symptomatic and asymptomatic patients ($0.85 \pm 0.28 \text{ cm}^2$ vs. $0.88 \pm 0.25 \text{ cm}^2$, $P = 0.59$). Thirty-eight events were observed, including AVR in 26 patients and death in 16 patients (including 4 patients who died after AVR). The rates of event free survival were $70 \pm 5\%$ at 1 year, $62 \pm 6\%$ at 2 years, $47 \pm 8\%$ at 3 years, $43 \pm 8\%$ at 4 years, $43 \pm 8\%$ at 5 years, and $29 \pm 13\%$ at 6 years. The AV area index and AV velocity were found to be the most powerful predictors of outcome ($P < 0.05$). In this study, neither a symptomatic nor asymptomatic status was found to be a significant independent predictor of mortality.

In many patients, the development of symptoms is clear, but some asymptomatic patients are difficult to assess due to inactivity or under-reporting. Although a watchful waiting approach is generally justified in asymptomatic patients with severe AS, due to the high event rate and the possibility of rapid deterioration in patients who are 80 years of age or older, the consideration of early elective surgery might be worthwhile, even when patients are still asymptomatic.

CONCLUSION

The severity of AS affected the prognosis of even asymptomatic patients who were 80 years of age or older. Thus the frequent monitoring of their subjective symptoms combined with the objective measurement of AV area is necessary.