

Cox-Maze IV in elderly atrial fibrillation patients

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Abstract

BACKGROUD: More and more older patients experiencing atrial fibrillation(AF)with other structural heart diseases select the constant Cox-Maze IV procedure during cardiac surgery, but few studies have reported whether the older patients benefited from the Cox-Maze IV procedure. The purpose of this report is to present a retrospective analysis of the use of the Cox-Maze IV procedure in the elderly. **METHODS:** All participants in our center who underwent the concomitant Cox-Maze IV procedure from January 2011 to September 2018 were included in the study. The clinical data of the patients were analyzed, and inclusion and exclusion criteria were implemented. Multivariate analysis was performed to evaluate the effect of the constant Cox-Maze IV procedure on elderly patients with AF. **RESULTS:** A total of 57 patients aged ≥ 70 years (73.00 ± 2.68 years) were compared to 269 patients aged < 70 years (56.94 ± 8.99 years). During follow-up, atrial fibrillation recurred in 79 (24.23%) patients. The total sinus maintenance rates were 88.7%, 84.5%, and 74.9% after 1, 2, and 3 years, respectively. In multivariable models, factors of aging [HR: 1.84 (1.02-3.32), $p < 0.05$], female sex [HR: 1.72 (1.08-2.74), $p < 0.05$], hypertension [HR: 2.16 (1.21-3.83), $p < 0.05$], left atrial diameter [HR: 1.05 (1.03-1.08), $p < 0.05$], and aortic surgery [HR: 0.52 (0.29-0.94), $p < 0.05$] were associated with AF recurrence. **CONCLUSIONS:** Aging is a novel risk factor for atrial fibrillation recurrence. Patient sex, age, left atrial diameter, and hypertension should all be taken into account in deciding if elderly patients suffering from AF should undergo the Cox-Maze procedure. **Keywords:** Atrial fibrillation; Cox-Maze IV; Risk factor; Elderly

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