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ANALYSIS OF PREDICTORS OF ATRIAL FIBRILLATION AFTER PACEMAKER IMPLANTATION

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Objectives Many patients post pacemaker implantation developed into atrial fibrillation (AF). The factors that can lead a greater risk of AF post implantation from different researches are controversial. As the first domestic research in long-term follow-up, we aim to investigate the risk factors of atrial fibrillation (AF) after pacemaker implantation.

Methods Retrospectivel reviewed the clinical events and follow-up datas of 99 patients who accepted pacemaker implantation between January 1991 and January 2003 in our hospital. Firstly use univariate logistic regression analysis to evaluate the effects of coronary heart disease, hypertension, mitral regurgitation, LVEDD, LAD, LVEF, types of arrhythmia, pacemaker types, age and follow-up period in atrial fibrillation and then find the leading risk factors from multivariate logistic regression analysis.

Results Totally 99 patients enter this research:male 48/99 (48.48%), the average age 61.10±12.42 years, SSS 49/99 (49.49%), coronary heart disease 10/99 (10.10%), hypertension 31/99 (31.31%), diabetes mellitus 8/99 (8.08%), DDD 51/99 (51.52%), VVI 48/99 (48.48%), average follow-up period is 109.48±52.08 months. Morbidity of atrial fibrillation is 29.3% (29/99). The univariate logistic regression analysis showed that coronary heart disease (p=0.034, OR=4.304,95% CI 1.114 to 16.624), LVEDD (p=0.021, OR=1.119,95% CI 1.017 to 1.232), LAD (p=0.016, OR=1.117,95%

CI 1.021 to 1.221), RAD (p=0.043, OR=1.174, 95% CI 1.005 to 1.371), LEVF (p=0.003, OR=0.894, 95% CI 0.817 to 0.996) are related to the occurrence of AF after pacemaker implantation, while the multivariate logistic regression analysis showed that only the LVEF is related to the occurrence of AF after pacemaker implantation (p=0.041, OR=0.900,95% CI 0.813 to 0.996).

Conclusions Compared with other middle-term studies (follow-up 1–3 years) that suggesting VVI mode tending to AF, our long-term follow-up datas reveal that the impaired LVEF is a predictor for postimplantation AF.