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Major Adverse Cardiovascular Events in Adult Congenital Heart Disease: An Asia Population-Based Long-Term Study

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The aim of the present study was to identify the long-term major adverse cardiovascular events (MACE) in adult congenital heart disease (CHD) patients in Taiwan. From the National Health Insurance Research Database (1997-2010), adult patients (≥18 years) with CHD were identified and compared to non-CHD control patients. The primary end point was incidence of MACE. Cox proportional hazards models were used to compute hazard ratios as estimates for multivariate adjusted relative risks with or without adjusting for age and sex. A total of 3,244 adult patients with CHD were identified between 2000 and 2003 with the median 9.5-year follow-up. The five most common types of CHD found in these patients were atrial septal defect, ventricular septal defect, patent ductus arteriosus, tetralogy of Fallot, and pulmonary stenosis. Overall, the incidence of MACE was 6.21-fold higher in the CHD group compared with controls. After adjustment for age and gender, patients with CHD had an increased risk of heart failure, malignant dysrhythmia, acute coronary syndrome, and thrombolysis. Adult CHD patients had an increased life-long risk of MACE, especially heart failure, malignant dysrhythmia and acute coronary syndrome. Continuous follow up is necessary to improve overall quality of life.