

## **Age-related 10-year risk of lethal Cardiovascular Disease in Adult Patients with Congenital Heart Disease**

*Häcker A.-L. (1,2), Müller J. (1,2), Hager A. (1), Ewert P. (1), Oberhoffer R. (1,2)*

*Department of Pediatric Cardiology and Congenital Heart Disease, Deutsches Herzzentrum München, Technische Universität München, Germany (1); Institute of Preventive Pediatrics, Technische Universität München, Germany (2)*

**Background:** Cardiovascular diseases are a relevant risk for adults with congenital heart diseases (ACHD), since life expectancy has increased in these patients. While past research studied just single risk factors, this study examines the age-related risk for cardiovascular disease (CVD) based on multiple factors.

**Methods:** A compound risk factor established to assess the risk of CVD for the next ten years was calculated for 190 ACHD aged 30 years or older ( $45.6 \pm 9.4$  years, 49.7% female), examined between January 2017 and November 2017. The 10-year CVD risk was estimated with the Prospective Cardiovascular Munster Study (PROCAM) score, including the factors age, sex, systolic blood pressure, LDL cholesterol, HDL cholesterol, triglyceride, diabetes status (yes/no), smoking status (yes/no), and family history of cardiovascular events.

**Results:** ACHD had significantly lower PROCAM values compared to the national reference (ACHD:  $1.7 \pm 3.0\%$ , reference:  $4.4 \pm 5.5\%$ ,  $p < .001$ ), resulting in a calculated 61% lower relative risk. In total, only 10.7% of the ACDH had a reduced HDL cholesterol lower than 40 mg/dl, 20.9% had triglyceride higher than 150 mg/dl and 2.7% had increased LDL higher than 190 mg/dl. Diabetes mellitus was prevalent in 4.8% of the ACHD. Another 14.2% had a major cardiovascular event in their family before the age of 60.

**Conclusions:** Based on the PROCAM score the 10-year CVD risk is lower in ACHD compared to the healthy reference. It has to be further clarified if the lower prevalence of risk factors in LDL cholesterol, triglyceride and diabetes mellitus is a result of a healthy lifestyle and awareness for their disease.