

## **Clinical Characteristics of Coronary Artery Disease in Adults with Congenital Heart Defects**

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**Background:** There are now more adults with congenital heart disease than children. This aging cohort is at risk for acquired heart diseases such as coronary artery disease (CAD). The purpose of the study was to examine the clinical features of the CAD in adults with congenital heart disease.

**Methods:** A retrospective chart review was performed. The clinical characteristics of adults with congenital heart disease and angiographically confirmed atherosclerotic CAD were examined.

**Results:** One hundred and forty-one adults with CAD (69% male) were identified from a total of 12,124 patients (1%) seen in our congenital cardiac clinic. The most common cardiac diagnoses were atrial septal defect, bicuspid aortic valve disease, tetralogy of Fallot and coarctation of the aorta. We identified 7 adults with Eisenmenger physiology and CAD. The mean age of diagnosis of CAD was 56 +13 years. Twenty patients had premature CAD (14%) presenting before age 40 years. Traditional risk factors of patients with CAD were common and were present in the majority (82%) of patients. While many adults had symptoms of angina or myocardial infarction, a significant proportion (38%) were asymptomatic. The age at diagnosis in patients with coarctation of the aorta was younger than other subgroups (48+13 years). Seventy-seven percent (109/141) underwent percutaneous or surgical coronary interventions.

**Conclusion:** Atherosclerotic coronary artery disease may coexist with congenital heart disease. Coronary artery disease in adults with congenital heart disease typically occurs later in adulthood and in patients with traditional cardiovascular risk factors. This study highlights the need for cardiovascular risk factor screening and therapy when indicated.