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Increased Incidence of Coronary Artery Origin Anomalies Associated with Isolated Patent Ductus Arteriosus

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***Background*:**

Coronary artery anomalies may increase the risk of sudden death. While we are aware of an association between coronary artery anomalies and certain congenital heart anomalies such as tetralogy of Fallot and transposition of the great arteries, it is thought to be infrequently associated with isolated patent ductus arteriosus (PDA). We report our experience of coronary anomalies in PDA patients.

Methods and Results:

We reviewed 198 angiograms of PDA patients performed between 1999-2011, in order to determine the origin of the coronary arteries. In 100 angiograms (51%) the origin of the coronary arteries could be adequately visualized. An anomalous origin of coronary arteries was detected in 11/100 patients (11%). Seven had a single common coronary origin (7%). One had an aberrant origin of the left coronary artery from the non-coronary sinus and three had an aberrant origin of the right coronary artery; two from the left coronary sinus and another from the non coronary sinus.

Conclusions:

These findings suggest that the incidence of coronary artery anomalies in association with an isolated PDA may be considerably higher than were previously reported. In view of the increased risk of sudden death with coronary anomalies, a reasonable approach would be to determine the coronary artery origin and pathway following the diagnosis of an isolated PDA.