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TITLE

CORONARY ARTERY ANOMALIES IN TURNER SYNDROME

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ABSTRACT

BACKGROUND:

Congenital heart disease, primarily involving the left-sided structures, is often seen in patients with Turner Syndrome. Moreover, a few case reports have indicated that coronary anomalies may be more prevalent in Turner Syndrome than in the normal population. We therefore set out to systematically investigate coronary arterial anatomy by computed tomographic coronary angiography (coronary CTA) in Turner Syndrome patients.

METHODS:

Fifty consecutive women with Turner Syndrome (mean age 24 years [12-45]) underwent coronary CTA. Patients were compared with 25 gender-matched controls.

RESULTS:

Coronary anomaly was more frequent in patients with Turner Syndrome than in healthy controls [20% vs. 4% (p = 0.043)]. Nine out of ten abnormal cases had an anomalous left coronary artery anatomy (absent left main trunk, n = 6; circumflex artery originating from the right aortic sinus, n = 3). One case had a tubular origin of the right coronary artery above the aortic sinus. There was no correlation between the presence of coronary arterial anomalies and karyotype, bicuspid aortic valve, or other congenital heart defects.

CONCLUSION:

Coronary anomalies are highly prevalent in Turner Syndrome. The left coronary artery is predominantly affected, with an absent left main coronary artery being the most common anomaly. No hemodynamically relevant coronary anomalies were found.

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