

Supplementary data

Table S1. Risk factors for reoperation in patients with isolated CoA

Variable	Univariate analysis		
	HR	95%CI	<i>P</i>
Age at operation, mo	1.009	1.004-1.014	< .001
Age < 28 d at operation	0.628	0.113-3.498	.595
Operation year 2001-2011	5.425	0.624-47.187	.126
Preterm birth	2.981	0.310-28.657	.344
Operative technique			
End-to-end	0.742	0.133-4.135	.733
Patch plasty	7.167	0.722-71.138	.093
Prosthesis	16.000	2.936-87.196	< .001

CI, confidence interval; CoA, coarctation of the aorta; HR, hazard ratio; SAS, subaortic stenosis; VSD, ventricular septal defect.

In univariate analysis, older age at operation and prosthesis use were associated with an increased risk of reoperation. However, these associations were not confirmed in multivariable analysis, and no independent predictors of reoperation were identified in this cohort.

Table S2. Risk factors for catheter-based reintervention in patients with isolated CoA

Variable	Univariate analysis		
	HR	95%CI	<i>P</i>
Age at operation, mo	0.989	0.971-1.007	.242
Age < 28 d at operation	5.723	2.055-15.942	< .001
Operation year 2001-2011	0.872	0.373-2.037	.751
Preterm birth	2.010	0.514-7.858	.316
Operative technique			
End-to-end	0.583	0.232-1.469	.253
Extended end-to-end	1.106	0.473-2.586	.817
Patch plasty	1.428	0.165-12.386	.747
Prosthesis	1.227	0.262-5.759	.795

Age at CoA repair < 28 days was significantly associated with an increased risk of catheter-based reintervention in univariate analysis; no other variables showed a significant association.

Table S3. Risk factors for reoperation in neonates

Variable	Univariate analysis			Multivariate analysis		
	HR	95%CI	<i>P</i>	HR	95%CI	<i>P</i>
VSD	1.444	0.270-7.716	.667			
Other associated cardiac anomalies	4.250	0.803-22.491	.089	1.274	0.150-10.802	.824
Isolated coarctation of the aorta	0.371	0.070-1.962	.244			
Subaortic stenosis	18.750	3.506-100.280	< .001	11.183	0.978-127.829	.052
Operation year 2001-2011	1.304	0.284-5.999	.733			
Preterm birth	8.500	1.581-45.701	.013	10.763	1.605-72.196	.140
Operative technique						
End-to-end anastomosis	1.209	0.227-6.437	.824			
Extended end-to-end anastomosis	0.421	0.092-1.939	.267			
Subclavian flap	10.333	0.933-114.449	.057	5.213	0.326-83.283	.243
Patch plasty	4.333	0.458-41.014	.201			

In univariate analysis, subaortic stenosis (HR, 18.750; 95%CI, 3.506-100.280; $P < .001$) and preterm birth (HR, 8.500; 95%CI, 1.581-45.701; $P = .013$) were significantly associated with reoperation in neonates, while subclavian flap showed a trend toward significance ($P = .057$). However, in multivariable analysis, none of these factors remained statistically significant, although subaortic stenosis demonstrated a trend toward significance (HR, 11.183; 95%CI, 0.978-127.829; $P = .052$).

Table S4. Risk factors for catheter-based reintervention in neonates

Variable	Univariate analysis		
	HR	95%CI	<i>P</i>
VSD	0.525	0.172-1.601	.257
Other associated cardiac anomalies	0.689	0.296-1.604	.387
Isolated coarctation of the aorta	2.417	1.040-5.616	.040
Genetic anomalies	1.988	0.381-10.364	.415
Subaortic stenosis	1.407	0.283-6.989	.676
Hypoplastic aortic arch	1.500	0.463-4.855	.499
Operation year 2001-2011	0.891	0.390-2.039	.785
Preterm birth	1.278	0.390-4.189	.686
Operative technique			
End-to-end anastomosis	0.947	0.378-2.375	.908
Extended end-to-end anastomosis	1.122	0.490-2.567	.785
Patch plasty	0.816	0.097-6.893	.852

In univariate analysis, isolated coarctation of the aorta was the only variable significantly associated with catheter-based reintervention (HR, 2.417; 95%CI, 1.040-5.616; $P = .040$). All other examined factors, including associated cardiac anomalies, genetic conditions, hypoplastic aortic arch, prematurity, and surgical technique, were not significantly associated with reintervention.