

SUPPLEMENTARY MATERIALS

Patency of mammary or radial artery and saphenous vein in patients with all three conduits

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Sensitivity testing

The full analysis is replicated below according to whether the patient with the known calcified radial artery was excluded from the analysis (Table S1), or analysis restricted to > 10 years postoperative (Table S2), or the patient that did not declare symptoms until after his angiogram (Table S3) or all three removed (Table S4). None of these analyses were meaningfully different to the main analysis.

Table S1. Comparison of patency rates excluding patient with known preoperative radial artery disease $n = 192$ anastomoses

Comparison	Patency n (%)	P (GLMM)	P (Fisher's)	Perfect Patency n (%)	P (GLMM)	P (Fisher's)
IMA, RA, SVG		0.043			<0.001	
IMA vs. RA	59/61 (96.7) 71/76 (93.4)	0.147	0.461	59/61 (96.7) 71/76 (93.4)	0.316	0.461
IMA vs. SVG	59/61 (96.7) 45/55 (81.8)	0.017	0.013	59/61 (96.7) 10/55 (18.2)	<0.001	<0.001
RA vs. SVG	71/76 (93.4) 45/55 (81.8)	0.172	0.052	71/76 (93.4) 10/55 (18.2)	<0.001	<0.001
Arterial, SVG		0.017			<0.001	
Arterial vs. SVG	130/137 (94.9) 45/55 (81.8)	0.033	0.009	130/137 (94.9) 10/55 (18.2)	<0.001	<0.001

GLMM, generalised linear mixed model, IMA, internal mammary artery, RA, radial artery, SVG, saphenous vein graft, Fisher's, Fisher exact test

Table S2. Comparison of patency rates excluding patient with angiogram at 7 years $n = 193$ anastomoses

Comparison	Patency <i>n</i> (%)	P (GLMM)	P (Fisher's)	Perfect Patency <i>n</i> (%)	P (GLMM)	P (Fisher's)
IMA, RA, SVG		0.029			<0.001	
IMA vs. RA	59/61 (96.7) 71/76 (93.4)	0.146	0.461	59/61 (96.7) 70/76 (92.1)	0.265	0.299
IMA vs. SVG	59/61 (96.7) 46/56 (82.1)	0.016	0.013	59/61 (96.7) 10/56 (17.9)	<0.001	<0.001
RA vs. SVG	71/76 (93.4) 46/56 (82.1)	0.175	0.054	70/76 (92.1) 10/56 (17.9)	<0.001	<0.001
Arterial, SVG		0.017			<0.001	
Arterial vs. SVG	130/137 (94.9) 46/56 (82.1)	0.032	0.009	129/137 (94.2) 10/56 (17.9)	<0.001	<0.001

GLMM, generalised linear mixed model, IMA, internal mammary artery, RA, radial artery, SVG, saphenous vein graft, Fisher's, Fisher exact test

Table S3. Comparison of patency rates excluding patient who did not reveal presence of symptoms until after angiography $n = 191$ anastomoses

Comparison	Patency n (%)	P (GLMM)	P (Fisher's)	Perfect Patency n (%)	P (GLMM)	P (Fisher's)
IMA, RA, SVG		0.015			<0.001	
IMA vs. RA	58/60 (96.7) 70/75 (93.3)	0.146	0.462	58/60 (96.7) 69/75 (92.0)	0.253	0.299
IMA vs. SVG	58/60 (96.7) 46/56 (82.1)	0.016	0.014	58/60 (96.7) 10/56 (17.9)	<0.001	<0.001
RA vs. SVG	70/75 (93.3) 46/56 (82.1)	0.175	0.056	69/75 (92.0) 10/56 (17.9)	<0.001	<0.001
Arterial, SVG		0.017			<0.001	
Arterial vs. SVG	128/135 (94.8) 46/56 (82.1)	0.032	0.010	127/135 (94.1) 10/56 (17.9)	<0.001	<0.001

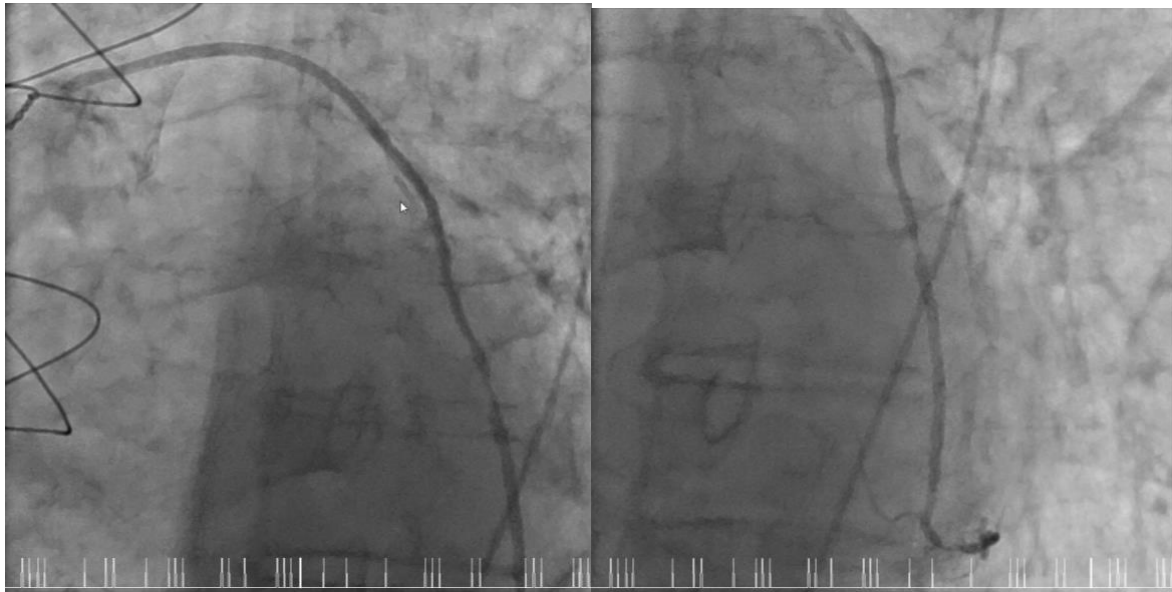
GLMM, generalised linear mixed model, IMA, internal mammary artery, RA, radial artery, SVG, saphenous vein graft, Fisher's, Fisher exact test

Table S4. comparison of patency rates with combined exclusion of preoperative RA disease and patient with angiography at 7 years and patient who declared symptoms after angiography $n = 184$ anastomoses

Comparison	Patency n (%)	P (GLMM)	P (Fisher's)	Perfect Patency n (%)	P (GLMM)	P (Fisher's)
IMA, RA, SVG		0.043			<0.001	
IMA vs. RA	56/58 (96.6) 68/73 (93.2)	0.146	0.463	56/58 (96.6) 68/73 (93.2)	0.316	0.463
IMA vs. SVG	56/58 (96.6) 43/53 (81.1)	0.017	0.013	56/58 (96.6) 10/53 (18.9)	<0.001	<0.001
RA vs. SVG	68/73 (93.2) 43/53 (81.1)	0.170	0.052	68/73 (93.2) 10/53 (18.9)	<0.001	<0.001
Arterial, SVG		0.017			<0.001	
Arterial vs. SVG	124/131 (94.7) 43/53 (81.1)	0.033	0.009	124/131 (94.7) 10/53 (18.9)	<0.001	<0.001

GLMM, generalised linear mixed model, IMA, internal mammary artery, RA, radial artery, SVG, saphenous vein graft, Fisher's, Fisher exact test

Figure S1. The only radial artery with irregular lumen 10.6 years postoperative (which was calcified at the time of surgery)



Download video of the angiogram (30 Mb file)
<https://s3.amazonaws.com/igraft/3Vangio/PreopDiseasedRA.mp4>

From the operation report:

“The left radial artery was exposed but on harvesting was found to be extensively calcified and not useable. The right radial artery was harvested; this was a 2.2 mm artery with at least moderate medial wall calcification.”